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ABSTRACT

This report, the second of three prepared for the Massachusetts Department of Education, focuses on a formative evaluation which identifies descrepancies between innovative Title IV-C educational programs as planned and as the programs operated. Contents are organized in five main chapters each of which represents a different perspective but all of which have a common purpose: to illuminate the change agent process at mid-point. Chapter One provides a discussion of the four project types: experience fusion, curricular infusion, special needs and central service. The technical assistance role of the Educational Research Corporation is described in Chapter Two. Chapter Three contains guidelines for designing an evaluation process. Chapter Four gives a complete example of a validation report. The final chapter offers a simulated version of a validation report which states four objectives and shows how data is collected and treated to produce a set of findings and conclusions. The Title IV-C ESEA Evaluation interview questionnaire, the project director questionnaire, training session agenda, training evaluation results, and guidelines for using standardized tests are appended. (Author/RH)

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MAKING INNOVATION WORK

A Second Year Report on Title IV-C Projects in Massachusetts, 1977

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SUBMITTED TO:

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FOREWORD

Since funds for innovation were made available to education with the passage of the Elementary and Secondary Education Act of 1965 (P.L. 89-10) and the 1974 extension of the ESEA Act (P.L. 93-380), large amounts of dollars have been invested through the States to administer programs to advance education. The implications for evaluation--evaluation of cost-effectiveness, effectiveness of goals and objectives, and of progress being made towards the achievement of innovative goals and objectives--are great. Over the years many reports and studies, such as the Rand Report and the LONGSTEP Report, have been made available, and profusive literature on educational change has developed. Yet, twelve years and a billion dollars later, we know little more than we did in 1965 about what really makes innovation work or how to diffuse innovations.

Title III and Title IV-C have funded many local innovations in Massachusetts. As new programs are developed by local school personnel through Title IV-C the Massachusetts Department of Education has embraced the concept of evaluation as the way to insure that public funds result in impact and educational gains. One of the major responsibilities of the Massachusetts Department of Education is to assist the schools in evaluating program effectiveness for innovative projects.

The process of change, as anyone who has been involved with educational innovation can attest, is extremely complex. Yet through the examination of educational change there are a number of insights that can prove very useful to the practicing project administrator. In this examination of educational innovation in Massachusetts, MAKING INNOVATION WORK, we have reported on how people are dealing with the questions of how to create innovations in the schools, and at the same time we have worked with projects in their local settings.

This evaluation of Title IV-C projects has been accomplished through the utilization of outside national consultants, Ronald G. Havelock, a renowned expert in the field of problem-solving and educational change, and Glen Heathers, in the area of educational innovation and individualized instruction. Local insights have been developed through the application of questionnaires and through onsite interviews and meetings with project directors. This mix of meetings, the literature on change, contact with people, and direct interviews has provided us with the enclosed report.

In this report, prepared for the Massachusetts Department of Education, we have focused on a formative evaluation which identifies discrepancies between the programs as planned and the programs as operated. The formative evaluation looks for actual or potential problems in the operation of Title IV-C projects in order for administrators to make adjustments or refine the scope of their projects. This report does not pass qualitative judgments on the projects; it simply is a means of gathering information that reflects the progress and character of the way Title IV-C

is being implemented in Massachusetts. Information that can be used to modify the design of existing projects or to plan new and improved ones should prove of enormous benefit to the Title IV-C Advisory Council. MAKING INNOVATION WORK is a document designed to be of assistance to project directors, Massachusetts Department of Education staff, and the Advisory Council for Title IV-C as they move in the direction of locating and identifying successful practices.

In the past two years, Merrimack Education Center's efforts have been to focus on two areas of evaluation and administering change through information and training directed to project directors. This evaluation design has been developed specifically for the purpose of providing project directors an evaluative perspective in administering their Title IV-C innovation programs. There has been a deliberate attempt to help these projects as they formulate their respective plans and program operations. This report, MAKING INNOVATION WORK, is the result of some lessons learned from these evaluative experiences, and as such, it reflects ideas on some of the most effective and productive evaluative arrangements.

The Merrimack Education Center has been pleased to cooperate with the Title IV-C funded projects in this evaluative phase of their efforts. During the past two years, the MEC evaluation team has had the opportunity to meet with project directors in groups and also to visit the sites and talk with project directors individually about their efforts on behalf of innovation in education. We would like to compliment the project directors on their efforts to date in providing innovation in the local schools and their desire to make innovation work, since we know full well the difficulty that this process entails.

The emphasis today in looking at innovation is a focus on evaluation and validation as the State adopts procedures for evaluation and identification of programs worthy of replication by other districts. The new validation process, based largely on the review process of the JDRP (Joint Dissemination Review Panel) will identify projects which successfully address instructional impact in the schools. This results approach has emanated from the Department of Health, Education, and Welfare in Washington in their efforts to justify innovation to Congress and, in doing so, to bring successful practices to the local user. The efforts by the Department of Education, Division of Curriculum and Instruction, and the Title IV-C Advisory Council should offer a sharper focus on the validation of these efforts in the next two years of Federal funding for these projects.

INTRODUCTION

THE TASK

Merrimack Education Center is engaged in a three-year project to provide, with the Massachusetts Department of Education, leadership, support and technical services to twenty-four ESEA Title IV-C projects in the Bay State. The imposing purpose of the project is not solely to help assure the success of each project but also to develop the capability of diffusing these projects. Simultaneously, the Center undertook to render similar assistance to sixteen single-year Title 622 projects across the State.

We at MEC are currently in the second year of this three-year program. Thus, our progress report is the second of three and the one produced at mid-point. Last year's report, EVALUATING ESEA TITLE III PROJECTS IN MASSACHUSETTS, 1975-76, included a description of the first year and made six recommendations which focused largely on training needs. That first report proved helpful in designing a framework for the 1976-77 activities accounted for in this second report.

The problems of assuring adoption of educational innovation are formidable. In 1961, C.P. Snow could write:

> *In a society like ours, academic patterns change more slowly than any others. In my lifetime, in England, they have crystallized rather than loosened. I used to think that it would be about as hard to change, say, the Oxford and Cambridge scholarship examination as to conduct a major revolution. I now believe I was over-optimistic.*

In appreciation of the problems inherent in innovation and in diffusion, MEC and the Department have linked to render technical assistance and services to a new crop of promising programs.

WHAT IS PRESENTED

Our report serves as a progress report, a structure for reflection and a basis for action. The issues are discussed by Dr. Ronald Havelock in his chapter. Promise and peril--it's all there.

Each chapter in our report represents a different perspective but with a common purpose: to illuminate the change agent process at mid-point. The chapters have been edited to assure clarity and a tight presentation. Yet each author's style is intact and each author has shaped his material to serve a specific purpose.

The general analysis of approaches and events is described by Havelock who has been involved with the project from its inception. He offers us an organizational framework for assimilating the impressive amount of data collected under his tutelage in a series of structured interviews.

To show the Havelock approach and to note for the reader the practical perspective of those working on the project, the interview materials included this rationale:

> *There are three objectives to these field visits we are making now. The first, and perhaps most important, is to determine ways in which we might help out with various phases of the project, especially with issues of long-term maintenance and dissemination. Secondly, we want to get some information from each of the projects which we can use later in the workshop sessions we have remaining. The third is to collect information for the State on the problems and progress of this first year of Title IV-C which will help the State staff do a better job next year.*

Overall, as Havelock reports, efforts to discuss the projects on a one-to-one basis or in project clusters appeared to produce a better working relationship.

Havelock allows that progress from year one to year two is by no means easy to define. It is clear that no tidy and obvious sequence of achievements is apparent--which is not to say progress is not taking place.

Havelock ends his chapter by stressing the importance of process. He recommends several different strategies to MEC in the coming final year of Title IV-C funding.

The Educational Research Corporation (ERC) chapter serves three specific and useful purposes. The first is to compile information about the 1976-77 Title IV-C projects in the Bay State with an emphasis on project evaluation. The second is to use the data to suggest ways to proceed in the next year of activity. And the third purpose is to render an accounting of the work of ERC relevant to this project.

Through the second purpose, ways to proceed in the next year, the formative evaluation processes are swung into a state of readiness. Since both project success and project diffusion are made one and the same in Title IV-C programs, the uses of interim evaluations such as this can be powerful.

The development and the diffusion of a project typically requires that application of a variety of high-order skills and sometimes felicitous circumstance. Not the least of these skills, outlined later in the ERC report, are (1) a clear understanding of the project and project

objectives, (2) an effective system of communication, (3) an operational process to bring off implementation and, (4) a battery of ways to evaluate what's happening.

ERC works its intent by using two kinds of instruments, the first is a Project Director's Survey, and the second involves the evaluation forms, covering ERC's IV-C training sessions.

General concensus and easy agreement are not hallmarks of the 1976-77 IV-C project director's responses to the survey. However, most did agree that the projects had satisfactory beginnings--that space, facilities, staff and the like were available. And most who responded were positive about ERC's training sessions.

In Chapter III Pam Woodroffe of ERC furnishes us with a nicely turned out evaluation process complete with do's and don't's and examples. Her conviction and ours is that evidence must be supplied showing the efficacy of adopting an innovation as part of the diffusion process. Ms. Woodroofe stresses the need to develop a set of objectives which can be tested. Her introductory materials are supplemented by a selected list of reading found at the end of this report.

The final two chapters help to tell the story of validation in a practical way. The prospects of adopting any innovation that is not evaluated and not validated must be viewed as bleak. The validation process which is presented is both comprehensive and detailed.

In summary, the 1976-77 year has seen its share of challenge and of progress on substantive issues. The workshop leaders and their topics were chosen in response to the needs of project directors.

Jack Reynolds, Title IV-C's Coordinator in Massachusetts, laid out the ultimate set of issues for the project when he wrote:

> *A major facet of ESEA, Title IV-C is the identification and sharing of effective educational programs. The pressure for more new programs has clearly been joined, if not replaced, by a call for proof of effectiveness. Development of innovative approaches to problems must be balanced with the sharing of successful practices and the termination of ineffective programs. Educational agencies at all levels, Federal, State, and local, have an increasing obligation to provide thorough evaluation of programs. This must be done so that informed decisions can be made as to whether the program should be continued, expanded, or terminated. Funding agencies must pay a "consumer protection" role, through program evaluation, in determining the effectiveness of the programs they fund.*

What remains is that this report be studied by those who care about innovative projects and their diffusion. To study this report is to prepare ourselves that much the better for the exciting and crucial year ahead.

LEARNING THE INNOVATIVE PROCESS BY DOING

THE STRUCTURE

The 1976-77 school year marked the return to an earlier policy for federally funded and state administered support of local innovations in school districts. This year's effort consisted of the expenditure of nearly $900,000 through twenty-four projects, with the promise of affecting up to 75,000 students at least indirectly and perhaps as many as 2,000 directly. Most of these projects were new starts although some had benefited from modest planning grants and others could be described in part as spin-offs from previous efforts in different districts inside and outside Massachusetts. Project applicants were also encouraged to plan in terms of a three-year funding cycle leading to the full acceptance and integration of the innovation within the local district thus reverting to a policy suspended two years previously as the old Title III program of ESEA wound down.

In the last year of Title III the state had supported thirty-three projects on a one-year planning cycle and had invited Merrimack Education Center (MEC) to provide a combined program of formative evaluation and training for project directors. Both the training and the evaluation focused not so much on either the content or expected outcomes of the projects as on the process by which they were planned and managed. Results were summarized in a report for MEC by Dr. Havelock entitled, "The Process for the Product." In brief, it was noted that project directors come to their jobs with considerable enthusiasm for the improvement of education and dedication to the particular type of reform which they have proposed. Nevertheless, they are frequently frustrated by the complex and often seemingly conflicting demands of their own role.

The Havelock-MEC report of 1976 was strongly confirmed by a follow-up study by Widmer (1977) on twelve Title III projects in Massachusetts funded in the cycle, 1971-73. In a previous study of the same projects Widmer had found several management process variables to be significantly related to successful adoption including "systematic planning, implementation and evaluation of objectives; early and widespread network building for support (especially among key decisionmakers, opinion leaders and gatekeepers) and extensive dissemination." The follow-up study indicated that the projects which remained fully intact on a local financial footing three years later were those that emphasized, except for evaluation, all of these elements.

In light of such findings it is understandable that the State of Massachusetts returned to MEC in 1976 to conduct a similar training and formative evaluation of the innovation management process. This time, however, inputs were provided early enough in the project cycle to make a difference two and three years hence when longer term adoption and maintenance will become critical issues.

The present report provides a glimpse of these twenty-four projects as they are getting underway; thus, it is more of a progress report than a definitive evaluation of outcomes. Extended interviews with each director form the basis of the "findings," and broadly confirm the pattern which was observed and reported on by Havelock-MEC in the previous year. The interview schedule covers a wide range of process issues, focusing on:

- The current status of the project, progress, deviations from plan, and problems
- The self-defined role of the project director
- Issues related to the building of relationships with decisionmakers and other interested and affected parties
- Strategies and activities engaged in on the way to meeting project objectives (such as diagnosing and sensing needs, searching for new resources of information, materials, persons, and monies, and identifying alternatives)
- Diffusion of information about the project; finding ways to improve the chances of project continuance beyond the Federal funding period
- Project outcomes evaluation

Because these interviews were conducted after the projects had been under way about six months, there was also an opportunity to sense project director reactions to four one-day inservice workshops provided by the Department of Education and the Merrimack Education Center to build management skills in the area of innovation process.

A major complaint emanating from these training sessions was that inputs were too general and difficult to relate to what directors perceived as their radically diverse projects' needs and circumstances. Partly for this reason, we have chosen to organize this year's report somewhat differently, looking more closely at project content and analyzing process issues in terms of content differences. To make this type of analysis possible we have broken the projects into four main "types" which we call:

- Experience Fusion Projects
- Curriculum Infusion Projects
- Projects for Youth With Special Needs
- Centralized Services and Teacher Inservice

Within each category, obviously there are also wide variations so that generalizations will still be required across rather heterogeneous sets. Nevertheless, certain process issues come into much sharper focus with this type of content clustering.

The report will have seven sequential sections as follows:

- The Projects as a Whole
- The Experience Fusion Projects
- The Curricular Infusion Projects
- The Special Needs Projects
- The Central Service Projects
- Conclusions and Recommendations Regarding Innovation Process in All Projects
- Reactions to the Inservice Seminar Sessions and Recommendations for Changes

The Appendix carries a copy of the interview questionnaire used in gathering information.

THE PROJECTS AS A WHOLE

FUNDING LEVELS

A total of 882,000 dollars divided twenty-four ways yields an "average project" of about 37,000 dollars, but funds were not spread equally among projects. The median funding level was only 30,000 dollars indicating a strong skew to the lower end of the distribution; seven projects received 20,000 dollars or less; however, eight others received 50,000 dollars or more suggesting a kind of bi-modal distribution. The range was from 7,500 to 70,000 dollars.

Across all projects about fifty-eight percent of the funds were allocated to professional salaries, a figure which might be significant later as representing an estimate of the minimum cost of long-term adoption for the local school budget. Among the four types, central service projects called for seventy percent of the budget on professional salaries.

Among the four project types, most funds were devoted to special needs projects; there were eight projects in this category totaling 351,000 dollars. However, on an individual project basis, the experience fusion projects were most expensive, averaging 44,000 dollars.

GRADE LEVELS

In this year's projects there is a pronounced skew toward the upper end of the K-12 continuum. Ten projects focused exclusively on high school youth (grades 9-12), including most of the special need projects; two combined high and middle; three concerned middle only (grades 6-8); four combined middle and elementary; one project concerned preschoolers and their parents and one concerned preschoolers being tutored by 7th graders. Three projects dealt with all grades in general. None concerned elementary grades exclusively.

NUMBERS SERVED

The most difficult statistic to deal with and yet the most important in a fundamental sense is the number of students served. Cross-project comparisons can be invidious and at the same time meaningless since one project can claim to serve thousands of students for a few pennies a head whereas another appears to lavish thousands of dollars on a handful of students. The latter projects may have vastly greater impacts and, in strict cost-benefit terms, may turn out to be superior. At this point it is impossible to judge which serve the public interest better. With this caveat in mind, we can note that projects tend to be of two varieties: mass servers and special servers. Generally, the mass servers are in the central service type and their effects on students are expected to be indirect. The special servers are the experience fusion and the special needs projects. Curricular infusion projects are of both types but more generally are mass servers. Most special serving projects also have the potential, through dissemination and innovation, to become mass servers as well, and if Widmer is correct, their survival may depend on it.

General facts about the 1976 generation of Title IV-C projects in Massachusetts are summarized in Table 1 which follows.

Widmer, Jeanne L. "Innovations and Bureaucracies: A Reexamination of Diffusion Strategies for State and Local Systems." A Paper presented to the American Educational Research Association, April 1977.

TABLE 1

GROSS STATISTICS ON MASSACHUSETTS TITLE IV-C
1976-1977

Type of Project	Number of Projects	Total Expend-itures	Mean Expend-itures	Average Salaries Percent of Total	Grade* Levels	Students Served Direct/Indirect		Average Direct
Experience Fusion	4	$189,000	$47,250	53%	4 HS 2 HS 1 HS	550**	3600**	138
Curriculum Infusion	7	182,000	26,000	51%	1 HS 6 MS 5 ES	22,500	?	3214
Special Needs	8	351,000	43,875	56%	6 HS 1 MS 2 Pre S,K	9,400	?	136***
Services	5	160,000	32,000	70%	1 HS 2 MS 2 K-12	?	44,000	?
TOTAL	24	882,000	36,750 Median 30,000	58%	Skew toward HS-MS			

*Many projects serve mixtures of levels. Therefore, totals are greater than number of projects.

**Very rough estimates based on proposals and interviews.

***Excluding Fitchburg's testing program which nominally affects all students even though only a few may be assigned to special activity.

THE EXPERIENCE FUSION PROJECTS

From many points of view the 1976-77 IV-C projects of greatest interest and perhaps greatest potential are those which link classroom learning with life and work experiences outside the school. Four projects fit clearly into this pattern.

A brief description of each of these experience fusion projects follows:

1. Somerville: "Project Outside-Inside" which makes use of vacant land adjoining school buildings as sites for student gardening projects; gardening activities in turn are related to topics of health, nutrition, and environment in many aspects of the curriculum. Although operational only in the sixth grade so far there are plans to involve grades eight and ten and eventually to develop a K-12 curriculum. There is also a significant community outreach via cable TV and other media, encouraging change in health and nutritional habits.

2. Turner Falls: "Project O.P.U.S." makes use of a six acre lot for the production of a variety of agricultural goods intended for market. The production-distribution chain is traced from beginning to end, incorporating curricular elements of mathematics, science, art, graphics, journalism, government, economics, etc. With the cooperation of faculty in all these areas a thoroughly interdisciplinary experiential learning environment is created. The project also anticipates earning income from produce which will significantly reduce the costs of program adoption for the school. There are also many community outreach aspects.

3. Wilbraham: "Project Blueberry" calls upon students to make comprehensive investigations of their suburban political-social-economic environment with the object of producing TV tape shows for local airing via a local public access channel (cable). Although inspired by and currently limited to the classes of two English teachers, this program also has potential fusion effects across curriculum areas and appears to represent a meaningful and vivid experience for youth not only in learning by doing but in making significant contact with a social environment which has been heretofore remote from the classroom.

4. Boston: "Project Shelter" a complete alternative high school curriculum focused on the restoration of abandoned private residences in blighted urban areas. This project has all the curricular fusion and community outreach possibilities of the other projects, and, like O.P.U.S., has the potential of producing outcomes of economic value.

As a group the projects are admirable for their potential for turning on students, making many academic subjects come to life in ways which illustrate their real life and occupational relevance. They also have the potential of building understanding and goodwill between generations, between students and teachers, students and parents, students and public officials, etc. The school becomes a much more visible force in community life in a positive way. At the same time, all these projects are demanding in that they call upon diverse skills, collaboration on many levels within the school, and between the school and the community, and extensive planning to make sure that students, materials, curriculum elements, and facilities converge. In conformance to Murphy's Law (that if anything can go wrong, it will) it is not surprising that these projects stumble and that the project directors usually have their hands full. Furthermore, according to Pincus (1974) and confirmed by Widmer (1977), radical changes which threaten the basic structure of schools and school systems are least likely to be adopted in the long run. There is every reason to conclude that these are radical innovations because they violate the traditional separation of classroom and the outside environment; they violate the traditional structure of the curriculum and of academic departments and disciplines; and they violate traditional modes of instruction and management of students within schools. For all these reasons, it is especially interesting and important to look in on these projects in their earlier stages of development to see how the process of innovation is being managed.

Our analysis for each type of project will follow a common framework:

- Descriptive data
- Director's role
- Relationships
- Problem-solving strategy (including need sensing, acquiring resources, and action alternatives)
- Dissemination activities
- Continuation efforts
- Evaluation including self-evaluation procedure and estimates of progress to date from the point of view of the project director and the interviewer

DESCRIPTIVE DATA

These four projects are similar in a number of basic descriptors. Three of the four are funded at about the 40,000 dollar level, the fourth, Boston's Shelter, with a complete curriculum to handle over thirty-six students, has 65,000 dollars. All but O.P.U.S. allocate a little over half their budgets to professional salaries. All these projects are aimed at high school students within one building and so far serve only a fraction of the students in that building. All these projects also require the collaboration of the project director and two or more teachers. With the exception of "Blueberry" these teachers come from different departments.

THE DIRECTOR'S ROLE

From last year's interviews we concluded that there were four basic functions which were typically performed by project directors. Some tended to focus on one or another of these functions; many assumed more than one; and a few "do-it-all" directors appeared to do all and more. At least three of the four directors of these experience fusion projects are definitely in the "do-it-all" category: they are bundles of energy and enthusiasm, some of which appears to rub off on others. The four categories break down as follows:

TABLE 2

Project	Manager Now %	Manager Later %	Facilitator Now %	Facilitator Later %	Communicator Now %	Communicator Later %	Guiding Light Now %	Guiding Light Later %	Other
Outside-Inside	10	25	25	10	15	15	50	50	
O.P.U.S.	25	30	25	20	10	30	30	20	
Blueberry	70	70	10	10	10	10	10	10	
SHELTER	20	20	30	30	10	20	10	15	30 15 (teacher)
Average Percent	31	36	23	25	11	19	25	24	

These data suggest that three of the four see their role in somewhat similar terms. Only the Blueberry director sees his role primarily as that of a manager. Only the Shelter director had substantial additional role involvement--as a teacher to the students in his project. Other points worth noting in this table are:

- There is almost equal emphasis on the roles of manager, facilitator, and guiding light
- Somewhat lower emphasis on communication
- There is little sense on the part of any that their roles will change substantially as the project goes along
- And to the extent that there is any shift it is in the direction of increasing the communication function (for O.P.U.S. and Shelter)

In response to the question of other roles or functions besides these four, directors reported "teaming," "orchestrating," "looking for new sources of funding," "looking for ways to expand the program," "exploring sites for next year," and "teaching," although only the last-mentioned was accorded a specific time percentage. All project directors devote 100 percent of their work time to the project. For most it appeared to be an all-consuming activity occupying much more than the conventional forty hours.

In describing their roles, two emphasized that they "do everything" and one admitted that this led to trouble at times. The other two emphasized their roles as "coordinator," "facilitator," and "orchestrator." The most important attribute for performing their roles successfully were seen as "keeping many things going at once," "aggressive persistence," "patience," "getting along with people," and "dealing with people." Only one mentioned specific technical skills.

In summary, directors of these experience fusion projects tend to be high energy "doers," devoted to their work, and one could say their "mission." There may be a possible danger that their projects are too closely associated with themselves as people and too dependent upon them to survive and expand without these particular individuals involved. Blueberry is the exception to this pattern in some ways although the success of Blueberry may depend on the continued energy investments of its two teacher-originators.

BUILDING AND MAINTAINING RELATIONSHIPS TO KEY PERSONS

As noted above, two of the four emphasize people-relating skills in describing their own role. It is clear, however, that all four projects rely on a considerable amount of administrative support from superintendents and assistant superintendents. In three of the four, these

relationships were rather personalized; one made the point that he was on a first name basis with everybody; another noted that the school committee president was an old friend; another noted that the superintendent himself was a farmer and hence took a special interest in the project; in fact, the assistant superintendent had written the original proposal thus assuring a considerable amount of institutional commitment. The Shelter Project is itself sheltered from Boston's sometimes stormy educational weather by a strongly supportive school headmaster and the fact that the host institution is designated as a "magnet" school.

All four projects reported some kind of problems in the area of building relationships. One director complained that he did not have enough time to meet with teachers; another lost the participation of a teacher with key technical skills and good student rapport because his departmental colleagues pressured him to get out, seeing the project as a threat to their more traditional approach to providing such skills; another had a key staff person walk out. Three of the projects had considerable logistical problems and delays due to blocking somewhere up the line; in one case it was the school committee and its chairman; in another case it was the business manager of the school system who delayed ordering necessary supplies. The Blueberry Project had early difficulties getting cooperation from local TV stations on whom it would be dependent for project fulfillment. Thus, in each case problems tended to be unique to the type of project and involved a very complex network of people inside and outside the schools.

From our point of view, however, what appeared most striking and similar across projects was the lack of planning or deliberate strategy on the part of these directors with regard to relationship building. This would appear to be a significant shortcoming for effort which depends on such a diverse set of connections within the school and within the community. Project directors seem to have some faith in "doing what comes naturally" as far as relationships are concerned and may have an inclination to depend too heavily on their own dedication and energy and the goodness of the idea to carry them through difficulties with others.

PROBLEM-SOLVING STRATEGY

We asked directors to describe their own "strategy or model of change" as exemplified in the project, and as in the previous year the question did not yield much response; apparently project directors do not have an explicit strategy worked out or articulated. Here are some responses: "Change strategy is all over the place, setting objectives and meeting then, lots of media;" "completion of the task;" "following the path of least resistance--advocacy-building on strengths--operating in a low key." In their responses none of these project directors spontaneously mentioned the steps of a problem-solving approach as described in Havelock's Guide and elsewhere; i.e., need sensing and diagnosis, search for resources, generating alternative solutions, and test of chosen alternative. In response to specific interviewer probes on these topics we found the following:

1. Diagnosis

Three of the four projects invested minimal effort in needs diagnosis or assessment after the project was funded. The Shelter director felt he had discussed needs on an on-going basis with the 36 students in the project and the Outside-Inside project had begun with inquiries addressed to 50-60 teachers. The O.P.U.S. director cited an HEW report which had documented the need for this type of project.

2. Financial Resources

Three of the four project directors expressed dissatisfaction with the amount of funds available for the project (in contrast to 1976 when almost no dissatisfaction was expressed from over thirty projects). In the fourth (Shelter) red tape blocked the use of funds for months, forcing the project director to make an unreimbursable, voluntary contribution from his own savings of 1,000 dollars. Three of the four projects also had significant additional sources of support beyond IV-C: One had a 5,000 dollar grant in hand from a private foundation which allowed circumvention of the red tape problems besetting other projects for purchase of materials and equipment; another made good use of ESEA mini-grants to teachers; another had prospects of receiving a 3-4,000 dollar grant from the Massachusetts Council of the Arts and Humanities. In general, it could be said that these directors were fairly resourceful in ferreting out additional sources of financial support.

Informational Resources

Three of the four projects had ideational roots and forerunners in other districts inside and outside Massachusetts. Transfer and adoption of these programs was, therefore, presumably assisted by the National Diffusion Network although neither the NDN nor its state facilitator gets any mention. There is also no deliberate use of ERIC, and minimal use of literature sources or expert consultants from universities or elsewhere. Resource search is thus seen almost entirely as a local matter, a fact which may partly explain the negative or indifferent response of directors to the MEC workshops. (See below for more discussion of this point.)

3. Generating Alternatives for Action

Two of the four responded simply "no" to the question, "Have you considered or developed alternative solutions for project objectives?" The Shelter Project was forced to go temporarily back to a classroom format for the winter because of the weather and no windows. The Blueberry Project discovered a new additional focus for project activities surrounding the Hamden bi-centennial, but otherwise plans essentially to repeat the first year's activities in years two and three.

DISSEMINATION AND DIFFUSION

As noted earlier, all these projects have significant community outreach and involvement activities, in two cases involving local cable TV. All the projects have visible output which should serve to give them a positive public image which, in turn, should be useful in promoting a positive image for the project and for educational innovation in general. This potential has not been attended to and it may be too early to do so. As the projects advance into their second year, however, it will be important for directors to raise their sights significantly if the full potential of these projects for reform of education within the state are to be realized. In the case of Blueberry there could be an expansion into other areas of the curriculum besides English with the involvement of many more teachers; the approach also seems applicable to other communities suggesting that it would form the basis of conferences or state-wide inservice activities.

There could also be significant learnings for Blueberry from projects O.P.U.S. and Shelter which combine many curriculum areas and fuse them around the task; there could also be learning for the latter two from both Blueberry and Outside-Inside which make creative use of TV and community interviews and questionnaires to build awareness, interest, and support for the program. As in other areas, there is so far a lack of articulation of strategy or specific planning regarding diffusion either inside or outside the district.

CONTINUANCE EFFORTS

As noted earlier, according to the findings of the Widmer Report (1977), an innovative project often has rough going when it comes to continuation because of the major changes which it forbodes for the structure and methods of education. In spite of this problem there has not been too much attention paid by project staff to building in the kinds of institutional mechanisms and guarantees which are required for the long term. Outside-Inside is so far strictly an add-on with no commitment for local funding although there is supposed to be one full-time equivalent built in by the fourth year (the project director says significantly that it will not be him because he will want to go on to other things by then). Shelter has a pledge from the headmaster that the project will be fully absorbed in three years. Again, the director says he will not stay in any case. As for Blueberry, there is so far a community which "seems supportive" but this support has yet to be turned into commitment. Finally, continuation plans for O.P.U.S. seem to hinge upon the sale of produce for a profit which returns to the project. While this notion seems salutary it also seems like a tenuous hope for the yield from a five-acre lot; self-sufficiency appears to be a grossly unreasonable survival criterion for a project which has so many intrinsic educational and community benefits.

EVALUATION

1. The Procedure

None of these projects has undergone an adequate evaluation. Three depend upon more-or-less subjective ratings by teachers, journals, logs, and judgments by advisory councils. On the other hand, all have the distinct advantage of having visible products which could be rated and judged by insiders and outsiders on more-or-less objective criteria. It was a matter of particular concern that the secondary benefits (and costs, if any) of these projects get a thorough review since it would appear that directors are only dimly aware of these even though such information could have great persuasive power with community, school boards, and administration. Among these secondary benefits appear to be much higher student morale and interest in school and increased community good will for education and for youth.

Results to Date Self-Reported by Directors Early in 1977

a. Speed: Only one project, Blueberry, reported itself to be on schedule, the others expressing varying degrees of dissatisfaction with the slowness of progress to date. Weather was a hampering factor, severely in the case of Shelter. Red tape also played a role and one director admitted to being "too ambitious."

b. Number Affected: Two projects were serving the number of students proposed while the other two were serving somewhat fewer in direct terms. Numbers become especially important important when per-student costs are high as in both Shelter and Blueberry. Both these projects have very great expansion-diffusion possibilities within the school itself which, if exploited, could raise the cost-benefit ratio considerably.

c. Amount of Impact: All directors seem pleased with the amount of impact on the students who are so far involved in their projects. The Shelter Project has turned out to be an excellent vehicle for improving inter-race and inter-sex relations as well as helping to retain potential dropouts.

When asked to point out the major items of criticism they would level at their own projects, two sighted slowness, two cited insufficient ties so far to the community, and one cited lack of time spent directly with teachers.

Reflections of Interviewers and External Evaluators

In our judgment, all these innovations have extremely high potential as changes which will bring multiple benefits to school and community at modest financial cost. They can change attitudes and make the curriculum more relevant. They support creative and relevant teaching in methods and content. We feel, however, that all these

projects are in serious danger of falling very far short of this potential for a variety of reasons, viz:

- Most of the project directors are not stressing the wide educational change potential of their projects
- The projects appear to be dependent upon the energy, enthusiasm, and creativity of the director even though the director sees his role as only a temporary one
- The lack of specific awareness by the director of his role as a change agent and the requisite skills surrounding such a role
- The lack of specific planning and execution of a strategy of building relationships with those persons and groups whose long-term support is necessary for the survival of the project
- The lack of articulation of a strategy of problem-solving which is sensitive both to ongoing and changing needs of students and teachers and to the evolving information resource base outside the district
- The lack of articulation of a strategy of communication, expansion, and diffusion which takes into account both the full potential of the projects as image builders and the knowledge which is available concerning the diffusion of innovations in general
- The lack of a consultative and inservice function for IV-C directors which adequately motivates them to perceive and to remedy the above-listed deficiencies

THE CURRICULUM INFUSION PROJECTS

Seven of this year's projects involve various kinds of curricular changes or changes which affect students only in certain subjects. Four of these concern the arts, one history, one English, and one nutrition.

A brief description of each of these curricular infusion projects follows:

1. Greenfield: "Children, Artists, Sound, Color, Cameras" is a "collaborative effort between the Arts Council of Franklin County and the Franklin County Elementary Schools" to provide liaison to arts professionals, provide materials in kit form, and establish an arts resource center. In actuality, most of the effort is now going into the preparation of kits based on kit development in a prior project in Hanover, New Hampshire. The modest Title IV-C grant of 11,000 dollars supplements a larger amount (20,000 dollars) contributed by the Arts Council itself.

2. Boston: "Music in the Academic Curriculum" involved workshops for forty middle school teachers to prepare materials and activities that will "better prepare students" for attendance at youth concerts in Boston's Symphony Hall. Such activities are supposed to "bridge the gap between the arts and regular classroom subjects such as social studies and language arts." Budgeted at 57,836 dollars, it is the largest project of this type funded this year. A relatively small proportion of these funds goes to supplement salaries on the regular school payroll (16,500 dollars).

3. North Attleboro: "Project LITE" seeks to infuse arts-related content in various parts of the curriculum through teacher-developed materials. The initiating vehicle is a summer workshop for twenty-three teachers in which existing curricula for the third, sixth, eighth, and tenth grades are identified and revised. Lesson plan changes and in-school inservice will then be conducted by these teachers throughout the year. The budget is 30,000 dollars with nearly 20,000 dollars for professional salaries.

4. Lincoln: "Learning Through Art" project uses the facilities and resources of the DeCordova Museum to infuse visual art content into the "existing social studies curricula in elementary schools in five towns: Lincoln, Carlisle, Concord, Sudbury, and Weston." The key to this program is the use of the Museum's "docents" as classroom visitors and assistants to the regular teaching staff. They prepare materials and lessons; after one or two years, regular teachers can assume the same activities without outside assistance. Budgeted at 30,377 dollars, the project makes extensive use of volunteer help and contributed services by the Museum.

5. Springfield: "Colonial History Project" attempts to infuse an understanding of local history (natural and social) into the elementary curriculum (especially grades four, five, and six) in social studies and science. The principle vehicle is the development of "suitcase exhibits." Teachers participate in this development effort through a mini-grant program. A six-week summer workshop for five teachers and a coordinator launched this program. The budget is 25,600 dollars.

6. Springfield: Has also been awarded a small grant of 14,350 dollars for a tenth grade "English Composition Laboratory," involving three teachers and a university-based consultant. Much of the funding goes for release time to these teachers to conduct one laboratory class and to develop a modified curriculum to teach composition skills.

7. Southwick: Has received a modest grant of 13,400 dollars for the "Integration of Nutrition Education in Grades K through 12." So far the project has concentrated on the middle school grade levels, but employs a variety of strategies at various levels, essentially to heighten awareness. The project appears to be complex and ambitious particuarly in light of the small budget.

DESCRIPTIVE DATA

As noted in Table 1, relatively little money was spent on this type of project in both relative and absolute terms. Average budget per project was only 26,000 dollars with a range of 11,000 dollars to 58,000 dollars (Boston-Music). All of these projects put some emphasis on the development of materials or packages which could affect the experience of large numbers of students directly and could potentially have a useful life beyond the termination of funding. Hence, the estimated number of students who might be affected directly was quite high, over 3,000 per project compared to less than 140 for either experience fusion or special needs projects.

THE DIRECTOR'S ROLE

In sharp contrast to the experience fusion projects, most of these projects are headed by a person who had administrative responsibility over several other activities and hence devotes much less than half time to the project. The two exceptions are Greenfield and Southwick where both directors complain of overload and underfunding. In both these cases the director claims to function in all project duties and is heavily engaged in promotional efforts.

Of the four role types suggested, the most popular was "guiding light" (average 36% of time) followed by "facilitator" (23.5%), "manager" (20%), and "communicator" (17.5%). One director indicated that 15% of his time went to consulting on proposals. The most important attribute

was indicated as "experience" in two instances and "technical skills" in another. Evidently not too much thought had been given by any of these project directors to this question.

BUILDING AND MAINTAINING RELATIONSHIPS

Because so many of these projects involve materials development, they may not be as visible or as vulnerable to key power figures in the school administration or the community. In any case, of the relatively few difficulties reported, apathy and insensitivity are the principal ones. One director felt that educators in general had an unreceptive attitude toward the arts; in this case the director was from outside the school system and had relatively weak links with key administrators at any level. This director expressed a desire to develop parent pressure groups to force the schools to change. In contrast, another project director emphasized the need to keep cool and be diplomatic.

Among key persons named there are no surprises. The Superintendent was cited most often, followed by principals, teachers, and parents. In six of the seven, teachers participate quite actively in materials development and hence can gain some sense of "ownership" of the project and its outcomes. Tellingly, the one project without much teacher participation complains the most about relationship difficulties.

On the more technical side, scheduling difficulties were reported in two instances, one the result of attempting to coordinate workshops for joint participation of different school districts, the other (Boston) complicated by the terms of the teachers' contract.

PROBLEM-SOLVING STRATEGY

Directors gave very little articulation of their respective strategies for developing, conducting, or implementing their projects. Materials development, either kits or lesson plans or curricula, or exhibits, formed the core strategy, supplemented by site visits. Also important was the use of existing resources in the community such as museums, symphonies, and arts councils. As noted earlier, teacher participation was also a part of the strategy in most cases. Thus, all the elements of a good strategy were often present, although not assembled or considered as a "strategy."

Regarding specific process issues we found the following:

1. Diagnosis

Three projects claimed to have expended a reasonable amount of effort on assessment and diagnosis of needs but in no case was this systematic and in general we would conclude that this is a weak feature of all these projects.

2. Financial Resources

Two projects expressed disatisfaction with existing funding levels and a third was clearly hampered in this respect. Three had substantial income from other sources and one operated with considerable in-kind support from a community resource (museum). However, little entrepreneurship was exhibited by any project to enlist additional financial support.

Informational Resources

Most projects did not exhibit any aggressive outreach effort for informational resources. As we've mentioned, the Greenfield project made some effort to adapt kits from a prior Hanover, New Hampshire project and other sources but found that essentially they had to start over. Similarly, the Springfield Colonial History project started from scratch, building on a prior bicentennial project. While drawing ideas from others across the country, including a Boston museum. The Springfield composition laboratory relied heavily on the consulting services of a professor from a nearby university. Finally, the Southwick nutrition project made heavy use of material provided by the Dairy Council, CEDIS, the Minnesota Special Education Curriculum, and other print sources. This would be the only project to date which could be said to have had a comprehensive search activity.

3. Generating Alternatives for Action

After the beginning of the projects, only one considered an alternative approach, the Greenfield Arts, which chose to develop their own kits rather than relying on Hanover's kits as originally planned.

DISSEMINATION -- DIFFUSION

Five of the seven projects had or used newsletters; two mentioned newspaper coverage, and one planned an extensive series of workshops for promotional purposes. Neither TV nor radio coverage was mentioned for any. Generally, there was no coherent planning for dissemination. This seems especially surprising considering the nature of the projects and their focus on materials development. There was little indication that any thought had been given to dissemination beyond the original target group, although in most cases, materials would primarily have general relevance and utility throughout Massachusetts and elsewhere.

CONTINUANCE EFFORTS

In one case (North Attleboro) there was evidence of wholehearted support by the school board and hence an assurance of future funding; in another case the project was seen as having political leverage and hence has been a recipient of other Federal grant support and has been written into some school budgets. For the others, the future seems rather

questionable. Most have no plans in this regard and few seemed to have given the issue much thought as of February 1977. Although such projects generally provide little threat to existing interests and institutions, their add-on nature makes them obvious targets of budget trimming when schools are scrimping.

EVALUATION

1. The Procedure

Very little was reported in the interviews on evaluation procedures. It would appear that most evaluations are planned to be minimal. Considering the fact that in almost every case a concrete product is planned, it would appear that quantitative evaluations of reasonable vigor could be designed.

Results to Date Self-Reported by Directors

a. Speed: One project expresses some frustration but there is general satisfaction.

b. Number Affected: No indication either of cuts or increases in size or scope of target audience.

c. Amount of Impact: One project director thought that the original approach of using an itinerant teacher-consultant might be too fragmented. Another was frustrated by an inability to raise the level of awareness and concern by sixth grade teachers (in nutritional issues) while a third expressed general frustration at the attitude of "educators" toward the arts and change in that direction. Otherwise, there was general satisfaction that the projects would have the kinds of outcomes and impacts that had been anticipated.

Reflections of Interviewers and External Evaluators

Most of these projects are following a rather well-trodden path to educational reform: participation by teachers in materials development with rather modest and localized objectives. In at least two cases, they also appear to be underfunded and in at least three cases, staffed by persons with insufficient experience in project management. It is especially surprising that no more thought has been given to how the materials, once developed, can be continued in use and spread to other users, even within the original jurisdiction. Within serious attention to diffusion concerns before these projects go much further, they are unlikely to realize their on-paper advantage over other types of projects in the numbers of students directly served.

PROJECTS FOR YOUTH WITH SPECIAL NEEDS

Eight projects respond to the special needs of various school or pre-school populations with emphasis on the potential school dropout. Five projects, specifically, address this group, attempting to relate to potential dropouts at grade levels nine, ten, eleven, and twelve. One provides parental guidance for "poor risk" preschoolers. One provides cross-age tutoring between white seventh graders and day-care preschoolers. And one provides awareness of career options in technology for women. Clearly, therefore, these projects are widely divergent and deal with various elements of the academic spectrum.

Brief descriptions of each follow:

1. Amherst: "Regional Alternative Learning Environment" provides a highly individualized program for "lost students" based on a diagnosis of their needs, and offers an interdepartmental team with one teacher each from English, social studies, mathematics, and science. Re-entry into regular programs is expected after one year. Grade levels ten and eleven.

2. Billerica: "Project REACT" proposes a program for one hundred high-risk potential dropouts which includes individualized instruction, life skill classes, career awareness experiences, and counseling. In another aspect of the program twelve students with "potential leadership and helping skills" will be trained as "peer counselors."

3. Reading: "Project FOCUS" is a complete alternative high school program within the high school for students "who are having difficulty functioning full time in the mainstream of classes." Emphasis is on skill building in specific areas of English and mathematics in addition to "family group" meetings and an outdoor physical education program emphasizing individual skill building and group cooperation. Behavioral contracting is a significant aspect of the over-all approach. Re-entry to the mainstream is to be achieved whenever possible.

4. Shrewsbury: "Project SHAPE" provides intensive personal counseling, as well as tutoring in basic skills in small groups, to ninety ninth graders identified as potential dropouts.

5. Fitchburg: "Project Competency" concentrates in its first year on system-wide diagnostic testing to identify potential dropouts. It will identify survival skills for such students and develop a curriculum around the notion of functional literacy.

6. The SPOKE Collaborative's project "Impact" provides workshops for parents and "surrogate parents" for preschoolers who have been screened in kindergarten as "poor risks" in cognitive, affective, and psychomotor areas. Towns served are Easton, Foxborough, Mansfield, and Norton.

7. Dorchester: "WALK TALL" is a cross-age tutoring project which brings white seventh graders together with Black and other minority preschoolers in a day care center. Basic skills are emphasized.

8. MIT: MIT-based "Project WITS," sponsored through the Cambridge Public Schools provides workshops and site visits for teachers and counselors to heighten their awareness of career opportunities for women in technology and science. This was the most difficult project to classify and perhaps deserves its own category.

Indeed, the last three named projects are only loosely connected to the others through the concept of "special needs" and each could be categorized separately.

DESCRIPTIVE DATA

Again referring to Table 1, we note that about 40% of this year's Title IV-C expenditures were in this category and that the average project budget of nearly 44,000 was second only to the experience fusion projects. As in those projects, there is a heavy emphasis on high school level; with the exception of the Fitchburg project which tests all students, the numbers affected directly are relatively small (136 students average for the other seven projects).

THE DIRECTOR'S ROLE

These directors, unlike many of the curricular infusion directors, are invested full-time or nearly full-time in their projects. Rather than being administrators, these directors are typically quite involved in their projects as team leaders, trainers, teachers, resource persons, and coordinators. Among the four possible role models, the most popular was "manager" although those who stressed this role saw it fading in the second year of the project. "Facilitator" and "communicator" roles were each rated at about 20% of the total effort whereas "guiding light" was a role which most of these directors spurned.

The single personal attribute of greatest importance in task performance was seen rather divergently by different respondents as "building relationships with subsystems and other service agencies," "communication and group skills," "mapping out the total system picture and seeing where you fit," "empathy toward youth," and "enthusiasm." In addition to the four role types suggested, some directors said their work involved "planning," "front end evading," "trouble shooting and acting as a buffer," "teaching," and "working directly with students."

BUILDING AND MAINTAINING RELATIONSHIPS

As for other types of projects, superintendents, principals, and school committees were all seen (about equally) as the key relationships to build and maintain. For this type of project, the actual configuration may have been quite complicated in many cases. One director found himself caught in a conflict between a principal and a pupil personnel services director. In the case of the MIT women in technology program, relationships to department chairmen turned out to be the key in establishing credibility and gaining entry to high schools.

In terms of technique, there were also few surprises. Advisory committees helped, and stress was placed on regular meetings and communication with top persons, keeping these as informal as possible.

Only three projects reported any difficulties in relationships. In one case, the principal operated in autocratic fashion, insisting on detailed scrutiny and approval of the smallest budget items. In another case, some guidance counselors disputed the use of teachers as group counselors for dropouts, perhaps feeling that their own role was thereby usurped or by-passed.

PROBLEM-SOLVING STRATEGY

There was also rather diverse perceptions of problem-solving strategies. Two directors say this in terms of relating to students, having a "bottom-up development" or building rapport with students on a one-to-one basis, communicating expectations to students of responsibility. One project saw its strategy as one of "infusion" of new skills, responsibilities, and role images into the teachers' daily work. At least three projects saw the strategy as one of communicating effectively with practitioners and other key persons. For the MIT-WITS project, it was a matter of "cultural exchange" or "the integration of people in different worlds." The Fitchburg director, though holding a line administrative post, saw himself continuing to act as he used to act when advising the system from outside, a consultant eliciting change on a voluntary basis, constantly keeping people informed and in tune with the step-by-step progress of activities.

Specific strategic questions were addressed as follows:

1. Diagnosis

Most projectsreported a rather high level of effort, primarily focused on student testing and screening rather than on system-wide needs or project needs. In two cases diagnosis was claimed to be "on-going" or "continuous." In at least three cases, it was made in quantitative as well as qualitative terms.

2. Financial Resources

Three projects expressed dissatisfaction with the current level of financial support; two others reported sufficient funds, although one felt that good use could be made of additional funds to expand the program; another project felt they would have some funds left over. One director noted that spending in early months of the project lagged while credibility and staff capability were being built. She feared that funds would later be insufficient as things really got rolling.

Informational Resources

Several projects in this special needs category showed initiative and creativity in reaching out for informational resources. Two projects were partial adaptations of NDN-validated programs from other states. Yet, even in these cases, "adopters" took elements from various sources to develop their own programs. The Shrewsbury Shape project, for example, made some effort to adapt the Title III "New-Model-Me" program but found that it did not quite fit their local needs. In addition, they conducted an ERIC search and made extensive use of work by Casefield.

Dorchester's WALK TALL project relied on several sources in developing its approach to cross-age tutoring including the University of Michigan (Lippitt) package, the book, Learning Through Teaching, and the NYC "Youth Tutoring Youth" project.

3. Generating Alternatives for Action

Five projects indicated some shift of course since funding began. For Amherst, it was a more effective and efficient method for identifying students in need of the program. In Fitchburg, there was a shift toward more attention to individual teacher needs. In WALK TALL, the students were brought into greater involvement with the curriculum, and in Shrewsbury, there was a move toward development of a unique tailored program from various resources rather than merely the wholesale adoption of one (New-Model-Me). Finally, in the MIT-WITS, there was a shift toward more school-by-school consultation activities. All these changes were relatively minor operational shifts but do suggest a reasonable amount of flexibility in project implementation.

DISSEMINATION AND DIFFUSION

Five projects report some kind of dissemination activity, usually within the original jurisdiction. Three others report no activity whatsoever. Two projects report having their own newsletter (Billerica and MIT); one other uses the collaborative's newsletter (SPOKE). Billerica also makes use of advisory council meetings, a parents advisory council, a slide-tape presentation, and a yearbook (being planned at the time of the interview), thus coming close to having a

comprehensive dissemination strategy. In Fitchburg, there has also been a major local dissemination effort including: slide tapes, preparation of scripts and transparencies, newspaper articles, appearances at local groups such as Rotary, parent meetings, the formation of an advisory council, and radio appearances. These activities in Fitchburg represent a rather complete groundbreaking for what might be a series of related reform moves in that school district emanating from this project. Finally, the MIT project has planned some state-wide and regional dissemination through a newsletter, appearances at professional meetings and colloquia, and through the publicity channels of the National Alliance of Business.

CONTINUANCE EFFORTS

Four of these projects have done some sort of planning for continuation beyond the IV-C funding cycle whereas the other four have not. Of these, the most solid appears to be Fitchburg where the school system is fully committed to take over the project and has already planned in this direction in the 1977-78 budget, with growth to follow in subsequent years. The Amherst Alternative Learning Environment Project also seems to stand a strong chance of continuance since 100% of the teaching staff is already on local funds; careful documentation and a report on the project are expected to strengthen the likelihood of survival. In Billerica, there is a phased program for school district pick-up of project counselor salaries at the rate of one yer year; teacher salaries are already covered by contract. A gradual growth of local cost sharing is planned in Shrewsbury, starting with 20% planned for next year. For some of the other projects it may simply be too early to come forth with such plans, considering the need to build credibility for the idea, the project, and the staff.

EVALUATION

1. The Procedure

Most of these projects are not geared up for extensive, rigorous, or quantitative assessment of outcomes at this time, especially as concerns student outcome. Two projects considered student attendance as a significant measure of success and another indicated that they wanted to get out of the testing business and shed that sort of image. Evaluation seems to be a rather weak area for this set of projects.

Results to Date Self-Reported by Directors

a. Speed: At least four projects indicate dissatisfaction with delays in getting started for different reasons. In one case, the project director was not hired until December with key staff not on board until February. Another had trouble recruiting staff because of the minimal financial and other incentives that appeared to be in

effect. For another, it was a matter of scheduling appropriate times for meetings with staff who had been selected.

b. Numbers Affected: In general, actual numbers involved seemed to be close to those projected; in one case, there was concern that students were being enrolled in the program merely because they were seen as trouble makers and not because they really belonged in the program. For two programs, students were reluctant to participate because of the refusal of the administration to grant full credit for the time, work, or activities involved in the innovative program.

c. Amount of Impact: There seemed to be general satisfaction that if logistical, credit, and scheduling problems could be solved programs would be a great success and have at least as much impact as expected. There was no exception to this view although one director admitted that she might have been a bit too ambitious in her expectations.

Reflections of Interviewers and External Evaluators

In terms of survival potential and in terms of promise of impact, this set of projects stands midway between the experience fusion and the curricular infusion projects. Because they treat special groups with special needs, they are a bit off to the side and, therefore, less visible and less threatening to the status quo than the former. In addition they relieve the traditional system of some of its worst student headaches. Philosophically, structurally, and instructionally, many of these projects represent a break from school tradition and may be seen by some as the opening wedge for a radically different approach to schooling in general. This potential conflict comes to the surface in one instance with the strong need of a traditional principal to keep all aspects of the new project under his thumb and in two other instances in the refusal or reluctance to grant full academic credit for project activities. All this emphasizes the need for good public relations with the school authorities as well as with the community. We appear to have a shining example in the case of Fitchburg where the project director, a part of the administration himself, has orchestrated an elaborate set of diffusion-dissemination activities (listed earlier) and has managed to gain the strongest school board backing. This director had the most articulated strategy of change of any of this year's Title IV-C directors.

CENTRALIZED SERVICES AND TEACHER INSERVICE

The five projects which remain to be discussed are similar in that they attempt to improve school system functioning by changing and upgrading the configuration of resources. For the most part, effects of these projects on students will be indirect. In three projects this is some sort of inservice activity; in a fourth project a mechanism is proposed for eliminating the need for substitute teachers. A fifth project proposes the organization of a regional instructional television authority.

A brief description of each of these projects follows:

1. Shelburne Falls: Proposes a multipurpose community resource center to serve nine rural communities through workshops, a professional library, an "idea center" and other resources and activities to "foster the development of our teachers, schools, and community." Budget -- $11,600.

2. Attleboro: The Attleboro-Swansea Project Interserv offers a replicable model for local sharing of teacher skills. Initial development has been in Attleboro with replication in Swansea. This rather complex project includes elements such as a self-generated catalog of inservice options, teacher self-diagnosis, workshops, team teaching, middle school development, and a media center. Budget -- $20,000, of which $16,500 is for professional salaries.

3. Fall River: "Promoting Reading Improvement in Middle Education" involves intensive staff development and the fostering of a new support role for classroom experimentation with curriculum and staffing. Budget -- $70,000, with $42,200 assigned to professional salaries.

4. Worcester: "Project Sub" provides a mechanism for inserting a variety of alternative programs and presentations in the classroom in place of substitute teachers in two public and one private high school. Budget -- $17,398, of which $10,148 is for professional salaries.

5. Pittsfield: Berkshire Regional Instructional Television Authority, funded through the Pittsfield Schools, plans to promote the use of instructional television by various means including extensive inservice, assessment of hardware and software needs and resources, and group purchase. Budget -- $40,940, of which $18,658 is for professional salaries.

DESCRIPTIVE DATA

Returning once more to Table 1, we note that this set of projects consumes the smallest share of the Title IV-C budget and that in spite of their rather grand aims and expectations, the average project receives only $32,000. More than other types, these projects are likely to cover a wide range of grade levels and they have the potential of benefiting a very large number of students, albeit indirectly. Finally, it should be noted that these projects are rather labor-intensive as far as professional staff goes, the average project consuming 70% of its budget in this way.

Worcester's Project SUB director: "don't rush, work with the administration, establish relationships, provide resources, and evaluate what you are doing and how well it seems to work as you go along."

On specific elements of problem-solving, we found the following:

1. Diagnosis

Nothing formal and nothing ongoing. Effort in this area was minimal for most of these projects.

2. Financial Resources

Shelburne Falls expressed the need for much more support: understandable, given the project's broad aims and modest budget. Other projects indicated that funds were adequate although there has not been much done to find additional funds. Project "SUB" depends heavily on voluntary effort which may be difficult to sustain over a number of years.

Informational Resources

Although many of these projects are resource linking by their very nature, they had little to say in interviews either about the kinds and amounts of informational resources they had retrieved and made available, or about their strategies for searching and acquiring them. Two projects depended on university connections, practicums, and credit programs. One, Shelburne Falls, was severely limited by budget. The Berkshire TV project indicated some frustration over the arrangement dictated by the state that they spread equipment purchasing over the life of the project when effective operation of the rest of their program depends upon having all the equipment in hand. However, this is more a matter of logistics than of information resources.

3. Generating Alternatives for Action

Only minor adjustments in operations were undertaken by most of these projects. Shelburne Falls has found that they needed to put far more stress on inservice activities and provision of services since the mere existence of a resource center is not adequate to insure its utilization. Berkshire TV found that they had to put more emphasis on equipment maintenance and repair than they had initially planned for. Project "SUB" has moved toward "packaging" series of five units to give more coherence, substance, and efficiency to their teacher substitution resource file. Such changes represent a normal response to the needs of a situation and reflect reasonable flexibility on the part of these projects. On the other hand, none represents a planned and deliberate effort to search for or test out alternative means to achieve objectives or a move toward alternative objectives.

DISSEMINATION AND DIFFUSION

There has been either minimal or no planning so far for any of these projects to extend beyond the originally designated region. Project "SUB" hopes to get Massachusetts validation eventually; Fall River has plans for workshops at regional conferences and system-wide release days.

CONTINUANCE EFFORTS

None of these projects had much to say about continuation or support of their projects on other than Federal funds. In Worcester, there has been some discussion between the superintendent and the school board about the possibility of picking up the project and the project director has hopes in this direction. Otherwise, the interviews revealed very little information in this area, suggesting that the topic is not one of high concern at the early stages of a service-type activity.

EVALUATION

1. The Procedure

Three of these projects plan to use logs as a means of monitoring and evaluating their activities. Otherwise, evaluation efforts are minimal and perhaps not seen as a very high priority. Evaluation of general resource centers is admittedly difficult and the indirect nature of services to students makes outcome evaluation in any ultimate sense almost impossible. However, there appear to be enough similarities among service projects to organize discussions on such topics as log-keeping methodology and criteria for services evaluation.

Results to Date Self-Reported by Directors

a. Speed: These projects tended to have some difficulty getting started, partly because of the difficulty of establishing intersystem relationships, partly because of the neophyte status of some of the directors. Project "SUB" had a false start and changed both project director and involved schools. They now report good progress, however, with the exception of parochial school participation. Attleboro, as previously mentioned, has had scheduling difficulties. Shelburne Falls reports overload. Berkshire TV is not certain, as of the time of the interview, how the project is doing and doubts the extent to which ITV is seen as a regional priority by the "powers that be."

b. Numbers Affected: Although some projects might be more effective with a more circumscribed client population, there have been no moves in this direction.

c. Amount of Impact: Very little reported and surely too early to tell, in any case.

Reflections of Interviews and External Evaluators

Regional cooperation on services, which is what most of these projects are attempting, may be exceptionally difficult in Massachusetts, especially without any state mandates or large financial resources to support it. In at least two cases, the set of communities being linked are more-or-less rural or small town and conservative politically and educationally. Thus, any progress toward regional services is to be applauded. It seems especially unfortunate that some of these service efforts are so thinly funded.

CONCLUSIONS REGARDING INNOVATION PROCESS IN ALL PROJECTS

Most of what can be said about process issues relating to this year's crop of Title IV-C projects has already been said within each cluster analysis. However, there are some issues which clearly cut across projects and others which are elucidated by comparisons across clusters. This section is devoted to discussing the most prominent of these.

TITLE IV-C PROJECTS AS "INNOVATIONS"

The underlying premise of the type of evaluation which has been conducted these last two years is that Title IV-C projects represent an unusual and perhaps upsetting break from the traditions and routines of everyday schooling. They are new forms grafted onto old social organisms with the hope or expectation that the old will be somehow improved thereby. One question which ought to be asked, therefore, is whether or not these projects are indeed innovations rather than mere subsidies or increments in existing and essentially traditional school activities. For an answer, we asked the directors to rate their projects along the dimensions of "innovativeness" indicated in Table 2.

Most directors saw their projects as quite innovative in a number of respects. Indeed, there is no particular pattern of differences among types of projects in this respect. It should be noted that more than one response was allowable for this question and some directors checked as many as four categories while others chose only one. There was no response from three project directors to this question.

TABLE 3

DIMENSIONS OF INNOVATIVENESS

	Type of Project				
Dimension	Experience Fusion	Curriculum Infusion	Special Needs	Centralized Services	All Projects
"It is a very new and unique concept as far as I know"	2	2	2	1	7
"It is new at least for Massachusetts"	3	3	3	2	11
"It is new at least for this school district"	3	4	5	3	15
"It is new at least for the client group I am working with"	2	3	3	3	11
"This project is not really an innovation in the usual sense although there are innovative aspects"	0	2	0	0	2
"This project is not intended to be an innovation in any real sense"	0	0	0	1	1

COMMONALITIES AND DIFFERENCES ACROSS PROJECTS

Although there are exceptions to every rule, we found as in 1976 that there were a number of ways in which the process of project evolution and management was similar, regardless of the type of innovation.

DIRECTOR'S ROLE

Nearly all directors saw their activities fitting relatively within the four role mix suggested in last year's evaluation; namely:

a. Manager: (including planning budgets, administration, staff, recruitment, supervision, making key decisions)

b. Facilitator: (including coordinating, scheduling, consultant to project staff, problem-solving, team-building, linking to resources)

c. Communicator: (including dissemination, public relations, liaison, relating to press media, speaking to outsiders about the project)

d. Guiding Light: (including writing, providing ideas, content and procedures, instigators, trainer, inventing, innovating, designing, creating)

Of the four, "manager" was seen as consuming the most time (30%), followed by "facilitator" (26%), "guiding light" (24%), and "communicator" (16.5%). These differences hold roughly across all types of projects, although the "guiding light" role is dominant for curricular infusion projects and very low for special needs projects.

RELATIONSHIP BUILDING

As many others before us, we continue to note the basic stability and similarity among school district organizational configurations. Nearly all projects need some sort of support or approval from the district superintendent; the smaller the district and the larger and more ambitious the project, the more important this support becomes. It is especially crucial for longer term survival and integration. After the superintendent comes the school board, and essentially the same rules of magnitude apply. Advisory committees are usually likely to be another important element of the relationship network which must be built and utilized, especially if there is planned to be parent and community impact and involvement. Nineteen of the twenty-four project directors make specific mention of such involvement and for many it is a core element. A fourth member of the relationship constellation is what could be called the "administrative infrastructure." This element

is the most likely to vary from project to project; for some it will be the principals; for others, central office staff, such as the director of pupil personnel services or the director of Federal projects, or the business manager (a handful of projects almost strangled in red tape this year); for some it will be department heads (very important in most high school configurations). The fifth vital element in the constellation is the teachers, especially important at the implementation stage; some of this year's projects succeeded quite well in gaining acceptance at higher levels only to run afoul of teacher schedules (which can sometimes be a screen for other types of resistance), teachers' lack of interest or motivation, teacher conformance to pressure from other teachers, and teacher skepticism about the value of the project or key elements of it.

For a few projects, notably in the experience fusion and special needs categories, students also enter into the constellation of key actors with whom a satisfactory relationship must be built. In some cases, good relations with students who have been perceived as "problems" enhanced a project's credibility with other key figures. In other cases, an assumption of student advocacy may be perceived as an act of alienation from the other more traditionally powerful actors in the system.

Most project directors agree loosely on the strategy of relating to power figures, stressing frequent contacts, informality, and face-to-face discussions. On the other hand, very few are able to articulate and execute a comprehensive strategy of phased relationship building, including the use of many forums and media to reach and persuade both formal and informal leaders of opinion and gatekeepers.

PROBLEM-SOLVING STRATEGIES

Projects were almost uniformly weak in articulating coherent problem-solving strategies. In many cases it appears that they are too immersed in what they are trying to do that they pay little heed to how they are doing it and how they might do it better. Possible exceptions to this rule are Worcester's Project SUB, Turner Fall's Project O.P.U.S., and Fitchburg's Project Competency.

On specific elements of problem solving, we also find general weaknesses. For most projects, ongoing diagnosis and rediagnosis of needs is either nonexistent or minimal, relying heavily on "informal" means. Resource search was impressively comprehensive in one or two instances but was generally nonsystematic and slanted toward predetermined solutions. The massive and readily accessible resources of the ERIC system are mentioned by only one project. A handful of projects make good use of the National Diffusion Network, at least four being partial adopters or adapters of NDN-validated programs. University resources are also very much in evidence, usually local universities, representing the single most commonly-cited type of resource. Searching for and choosing alternative solutions does not appear to be a consideration in either this

year's or last year's projects, possibly because this phase of problem-solving is thought to be subsumed in the proposal development process preceding grant awards.

DISSEMINATION AND DIFFUSION

This is in most cases local unless the logic of the project requires a broader audience (e.g., MIT's WITS). With the exception of Somerville's "Outside-Inside" and Fitchburg's "Competency" dissemination strategies tend to rely on one or two types of media only and to reflect no overall strategy of orchestrating media, planning phases of awareness and interest building, or targeting key persons or groups. Many directors admit that they have given little consideration to this area as yet, assuming that within the three-year cycle there will still be plenty of time for such matters.

CONTINUANCE

Similar comments could be made concerning continuance and apply regardless of the type of project. However, a strong argument can be made for not enmeshing projects in continuation issues if they still have two and one-half years to run. The reasonable attitude of most school boards and superintendents at this point would have to be "let's see what happens first--then come to us for more money and sanction." Nevertheless, at least one project (Fitchburg) is paving the way to full acceptance and integration into the school district's budget and operating routine.

EVALUATION

Although this area was not probed in depth in our interviews, it appears that many projects are operating on very loose rules regarding evaluation; the picture is confusing with little common understanding of methods, criteria, objectives, or uses of evaluative information. Few projects are self-consciously attempting to use in-process evaluation as part of a cybernetic system to provide continuous feedback to improve project operations. Furthermore, there may be little appreciation of the potential public relations value of good evaluations, looking toward project continuance.

Over-all Judgment (Evaluation)

It is too early to render any judgment on this year's Title IV-C program. Many projects seem promising and have project directors who are both talented and dedicated and are giving the state its money's worth. Nevertheless, there is a danger that much of this effort will be wasted because of lack of attention to the process issues raised here. We recognize that a good deal of "process" is just common sense and will be done by project directors without articulation, without specific

training, and perhaps without even much awareness that they are doing it. This is true for aspects of relationship building, for example; most people who have had years of professional experience working in a school system know who the important people are and try to get them on their side. The fact that this is not undertaken as a conscious strategy may not be too important. However, it seems obvious that process issues get slighted if they are not planned for in a more-or-less systematic way. For example, several projects would benefit from a broader search for informational resources; most people tend to reach only for what is either familiar or immediately available either in their heads ("experience") or close at hand. Similarly, there is no natural tendency to seek out and compare alternative solutions to a given problem or need; once the course is set, there is great reluctance to change except possibly in minor ways.

THE 1976-77 MEC WORKSHOPS FOR TITLE IV-C DIRECTORS

Nearly everything which has been said in this year's report reflects what we found last year. In fact, this year's seminars were guided in large part by the assumption that inputs on various aspects of innovation management would be of great value in project improvement. It is, therefore, somewhat frustrating to find such a mixed response to this year's early sessions. Sessions which dealt with the process of innovation in the abstract were particularly poorly received and were not perceived as being relevant by many of those attending. The report on last year's projects which was distributed to all with the indication that it was going to be a guide to this year's training was uniformly ignored by project directors. Those who read it could not recall any of its contents and it was clear that it had had no impact. On the other hand, some sessions were well received, including a simulation exercise and a session on evaluation.

In regard to the general approach toward the problem-solving process which was taken, some felt it was too general while others felt that they had no time to pursue it with all their other duties; i.e., rather than being seen as helpful, it was seen as an added burden. A few participants also objected to what they perceived as the "compulsory" nature of the sessions.

In execution some felt that the sessions lacked continuity and that inputs from diverse presenters were hard to integrate. Above all, directors expressed the need for more specific help and many suggested that subgroups of directors could be formed around different problem areas of greater relevance.

Reinforcing this point about relevance was the fact that most directors expressed appreciation for the field interviews upon which this report was based; they liked to have the opportunity to review the process of their projects in depth with a concerned outsider. This also suggests that the "process" issues and questions are seen as highly relevant

when they can be placed in a specific and self-relevant context.

Looking toward the next year one director suggested that interviews and field visits might precede sessions and be used as a basis of clustering. We hope that this year's mode of presentation according to project types will assist in that direction. One director also observed that it would make more sense to provide much of this process input and training for prospective directors prior to proposal development.

THE TECHNICAL ASSISTANCE ROLE OF ERC

THE GENERAL VIEW

Within the general rubric of the Merrimack Education Center-Department of Education approach, Educational Research Corporation (ERC) was asked by MEC to participate in the project and to lead key work sessions. Havelock's report, Chapter One in this document, is general while arranged to highlight programs and issues. ERC's report shows a task orientation as befits the charge to them. Based upon the needs of the project directors, ERC led group work sessions on evaluation techniques and on information exchange processes. A project director survey was also conducted.

The purpose of surveying project directors was to get a preliminary indication of problem areas Title IV project directors have dealt with, were dealing with, and expected to have to deal with as their projects progressed. The questionnaire (see Appendix B) therefore asked directors questions relating to communications, project objectives, project operation, evaluation, and training.

ERC provided two forms of feedback on the data contained in the survey. The first summary outlines the reported needs for future training of project directors and the second discusses results on the remaining topics covered in the questionnaire. In reporting the latter results, the report primarily focuses on the responses for Title IV-C project directors as opposed to Chapter 622 since evaluation of Title IV-C projects was ERC's primary reponsibility. However, in the few instances when differences between Title IV-C and Chapter 622 projects were substantial, notations are made in the summary.

TRAINING SESSIONS

ERC had several levels of involvement in the training of Title IV-C and Chapter 622 project directors. For some training sessions, ERC staff conducted their own sessions. In other sessions, ERC staff participated in training with MEC or State Department of Education staff. Finally, at a few sessions, an ERC staff member merely observed sections of training sessions to obtain background information relevant to other aspects of evaluation responsibilities such as the booklet preparation. Table I summarizes ERC's involvement in the training of project directors.

The primary effort of ERC's involvement in training sessions for project directors went into the preparation and execution of sessions which ERC conducted,specifically, the January 20th and May 12th sessions. Involvement in the remaining five sessions is either outlined in Table I or covered under the topics which follow.

The January 20th Workshop

ERC's conducting of the January 20th afternoon workshop was in response to the need expressed by many project directors in the fall questionnaire survey for assistance in evaluation. The afternoon meeting opened with a general session on evaluation to discuss the basics of evaluation design and to provide some fundamental information on developing questionnaire and interview instruments. (See Appendix B for the Agenda.) After the general session, participants chose one of three interest sessions to attend. The interest sessions covered (1) item writing for instruments. (2) use of evaluation results, and (3) practice in interviewing. Three smaller sessions went into more detail on respective topics. Finally, the entire group reconvened for a wrap-up session where participants were requested to complete evaluation forms on the entire day's training. The evaluation forms were then used as training devices to demonstrate good and poor instrumentation practices.

Throughout the afternoon, the various training topics presented in the discussion were supplemented with hand-outs for participants to keep and use as they proceed with their projects. The training forms included forms for Sources of Information/Data Matrix, Information/Instrument/Item Matrix, Some Techniques for Interviewing (a do's and don't's list), Objectives/Activities/Evaluation Organizer Form, a Selected Bibliography on Evaluation-Related Topics, and others.

As a follow-up to this training session, ERC compiled the results of the evaluation form to ascertain participants' perspectives on the relevance and usefulness of the sessions. A summary of the data appears in Appendix C.

The May 12th Workshop

The second training session which ERC conducted was directed solely to Chapter 622 project directors. The purpose of the session was two-fold: (1) to have directors exchange information with each other about their projects, and (2) to assist them in developing a summary report which the State Department of Education Title IV-C staff would use to compile a directory of all 1976-77 Chapter 622 projects.

To achieve the first purpose, each director at the session gave a summary of his or her project, emphasizing resources--materials and people--that other directors might find useful in future work. Much exchanging of information and resources occurred at this point in the training. To achieve the second objective, the ERC group leader provided directors with a suggested outline for writing a brief summary of individual projects with emphasis on providing recommendations aimed at various levels of potential readers--future Chapter 622 project directors, Department of Education innovative project supervisory staff, and individuals wishing to replicate existing projects.

INDIVIDUAL CONSULTATION WORK

At the November 17th meeting and throughout the remainder of the year, ERC encouraged project directors to use the staff expertise at ERC to assist them in evaluation, or for that matter, any other problems they met as they proceeded with their projects. Although ERC did not have the means to visit individually the various projects, members were available at training sessions and could be reached by phone or mail to discuss individual project activities.

Four project directors took full advantage of these services and did send materials to ERC for critiquing. Usually the materials were evaluation designs for which project directors wanted input as to their viability and rigor. An ERC member responded in writing to each of these directors with suggestions relevant to the specific material given to ERC. In one case,there was a phone follow-up to the written communications.

In addition to formal consultation work on these four projects, there were numerous instances where an ERC staff member discussed individual project concerns when project directors met at training sessions. These information discussions became much more frequent after the January 20th training session when project directors had a better understanding of the services available at ERC.

Finally there were, of course, individual project-related questions answered during the course of small group training on January 20th and February 15th.

EVALUATION BOOKLET

The final major service provided by ERC in the evaluation work of Title IV-C projects was the preparation of a program evaluation guide to be used by future Title IV project directors. Most of the people directing the newly-funded innovative projects have little experience with formal evaluation of programs and need guidance, not particularly on how to evaluate thoroughly a project,but rather on how to be a consumer of evaluation. That is, project directors are not expected to become experts on evaluation, but they must be familiar enough with evaluation and with designing a rigorous program so that it can be properly evaluated by specialists.

The booklet, which is the next chapter in this report, covers two basic topics--the development of operational program objectives and the use of an appropriate experimental design for a project. The objective of the booklet is to have project directors initiate a project which will be both internally and externally valid. The need for an internally valid project is obvious, but the concern for external validity has special meaning for projects funded by Title IV-C, ESEA. These are all innovative projects which should be attempting to solve

general educational problems. Once project directors have successful programs established at their local level, their goal should be to have other educational units adopt or adapt similar projects. It is therefore vital that new project directors consider the external validity of their projects from the beginning. The booklet therefore proposes to assist the new project director at the beginning of his or her project to establish a program which will meet long-range objectives of Title IV funding.

SUMMARY OF QUESTIONNAIRE RESPONSES

During the late fall, 1976, ERC sent to project directors of all Title IV and 622 projects in Massachusetts a questionnaire. Its purpose was to uncover problems the directors of these projects were having in order that the directors might receive specific training and technical services. The potential problem areas which primarily concerned ERC were communications, project objectives, project operation, and project evaluation.

Most of the Title IV and 622 projects were in their first year of operation; only four of the 38 had been operating for over a year. The current project director had been the first to suggest the idea for the project in 26 of those cases; seven had become involved first at the pre-proposal stage. From these figures and from the nature of the project directors' comments, we can safely say that at the time they responded to ERC's questionnaire, they were committed to their projects' success. In addition, it is clear that they were struggling with the need to establish effective communication linkages within their school systems and communities, to clarify their project's objectives for themselves and others, to translate proposal goals into the implemented realities of project operation, and to provide for some objective evaluation of the project's progress and success.

The following focuses on findings regarding the evaluations of the Title IV projects; 622 project findings are included only when they significantly differ from Title IV findings.

COMMUNICATIONS

Most projects involve communications with or dissemination of information to several audiences both within and outside the school system. As the following chart shows, the majority of project directors are "satisfied" with their level of personal contact with all but the parent categories.

TABLE 4

PERSONAL CONTACT OF TITLE IV PROJECT DIRECTORS WITH:	Frequency of Contact				Satisfaction with Contact	
	Daily	Weekly	Monthly	Less Freq.	Satis-fied	Want More Contact
Superintendent	5	2	10	7	19	5
Other central office administrators	5	10	4	4	19	3
School board members		1	7	16	14	8
School principals	4	10	3	4	20	4
School specialists	6	5	5	6	15	6
Non-project teachers	7	2	4	7	14	7
Project teachers	11	4	5		18	2
Participating students	8	2	2	7	17	2
Parents of participating students	1	1	1	14	8	9
Other parents			2	16	8	10
Town officials		4	1	16	10	9
Public media people		4	8	11	13	10
Other (specify) university people community agencies		1			1	

Fairly large percentages of project directors also expressed a desire for more personal contact with school board members, non-project teachers, town officials, and public media people. This reflects their wish to broaden the audience affected by and informed about their projects' activities. It also indicates a high level of awareness among project directors of the importance of personal contact with people other than those directly involved with the project, especially people who might influence their efforts to obtain funding and support for the continuation of the project beyond its initial funding period.

However, a number of project directors said they had too little time to make all the personal contacts they would like. Sometimes this was because they were located in different buildings from their potential contacts. Sometimes the project director found his/her regular

teaching duties did not allow enough time for the project. Besides time, the other major obstacle to establishing more personal contact with the above audiences cited by several project directors was lack of interest among those being contacted, who evidently felt that Title IV project's goals were "not a priority" or "extra-curricular."

All reporting project directors use other means besides personal contact, however, to inform these and other audiences. About half have used newspaper articles; all have used memos or newsletters or reports. Also cited were such diverse means as cable TV broadcasts, slide presentations, inservice programs, and speeches to alumni or Phi Delta Kappa. Ten project directors expressed satisfaction with the effectiveness of these communications methods (other than personal contact); six were dissatisfied; and seven felt they were "good" or "adequate."

In summary, then, although somewhat hampered by lack of time, the majority of project directors are satisfied with both the frequency of their personal contacts with most audiences and the effectiveness of their other means of informing others about their projects. In general the audiences with which they want more personal contact are parents, public media people, town officials, school board members and non-project teachers.

PROJECT OBJECTIVES

Only eight of the projects (fewer than a third) reported making modifications in their projects' objectives since last summer. All decisions to modify the projects' objectives were made by the projects' staff, directors or participants. Only two said the school administration helped in the modification process. Although the changes were varied, ranging from adjusting expected outcomes for students to budget changes, in general they reflected a delay in the start of the project and/or the scaling down of objectives to more reachable dimensions. Seventeen project directors reported no change in their objectives. About two-thirds of the project directors felt their objectives were "very relevant"; one-third said they were only "relevant."

When asked whether there were groups with whom they deal who seem not to fully understand the objectives of the project, slightly over half of the project directors said "yes." Most of the groups cited (teachers in other departments, central administration, parents, community leaders) were again those without direct involvement in the project. The reasons for their misunderstanding were given as poor communication, resistance to change in general, or specific territorial worries causing groups (such as principals, administrators or non-project teachers) to feel threatened. Some of the lack of communication was intentional on the part of the project director--a wish to disseminate information or inform others of procedures only after the conceptualization of the project was more solid. This, of course, reflects the fact that most projects have been operating for less than a year.

Seven project directors said there were not project objectives which they were having difficulty achieving. The others had found difficulties based on various groups' resistance to change, the difficulty in getting people to follow through from the planning to the action stage, a need for a change in the approach to or conceptualization of an objective, or the simple fact that, as one project director said, "Everything is just taking longer than I thought."

When asked what project objectives they anticipated having difficulty achieving in later stages of the project, ten of the Title IV project directors replied, "None." Three more indicated they foresaw difficulty with some aspect of the evaluation. Other answers were diverse, ranging from resolving legal and ethical issues to planning for institutionalizing the activity.

PROJECT OPERATIONS

In general, most projects listed obtaining project approval, obtaining appropriate facilities*, obtaining relevant materials, and obtaining organizational support as their easiest activities. Recruiting appropriate staff was listed by about equal numbers as creating no difficulty and creating moderate difficulty. Obtaining funding--both initial and continuance--was also listed as a moderately to greatly difficult area by eight projects. The following chart shows the details of responses when project directors were asked to rate their ease in handling various areas of project operation.

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*This was not among the easiest for 622 projects.

TABLE 5

TITLE IV PROJECT DIRECTORS' RATINGS OF THEIR EASE IN DEALING WITH AREAS OF PROJECT OPERATION

Areas	No or little difficulty in handling	Moderate difficulty in handling	Great or very great difficulty in handling	Not relevant
Obtaining initial funding	12	7	1	5
Obtaining project approval	16	2	2	4
Recruiting appropriate staff	13	9	2	2
Scheduling project staff	17	2	4	2
Scheduling students	11	3	3	6
Recruiting participants	17	3	2	5
Retaining participants	15	2	1	7
Obtaining appropriate facilities	17	3	4	2
Obtaining relevant mat'ls.	21	2	2	-
Scheduling training wkshps.	16	3	2	6
Scheduling parent meetings	8	1	4	11
Obtaining continuance funding	3	4	4	11
Obtaining org. support	19	3	3	2
Obtaining community support	14	5	2	3

About half of the project directors said their projects' major strength was the quality of the staff, particularly in their ability to work as a team. Over a fourth cited the strong support of their community or school system as a major strength. Several also mentioned good communication with teachers as a strength. Organization and planning were given as strengths by only two projects. The various other responses reflected the project directors' belief that student interest was high, several needs were being met at once or the changes were not so great as to foment resistance.

EVALUATION

While all projects planned to conduct an internal evaluation, many expressed uncertainty about the methods to be used. Eleven had begun the evaluation (mostly in the sense of having given some kind of pretest); fourteen had not.

We also asked project directors how successful (in their own terms) they felt their projects would be. About half said "very successful," while the remainder checked "somewhat successful."

Several salient points are to be gleaned from the results of the questionnaire working with the validation of innovative projects. These also suggest certain areas for inservice and technical services in the coming year:

- Project directors feel satisfied with their level of personal contact with all but parents. Some project directors also want more personal contact with school board members, non-project teachers, town officials and public media people. The main reasons cited for limited personal contacts were lack of time and lack of interest on the part of others.

- Fewer than one-third of the projects have modified their objectives.

- Over half of the project directors felt there were groups that did not fully understand their objectives.

- Obtaining funding seems to be an area with which a number of projects have experienced moderate to great difficulty.

- About half of the project directors feel the quality of their staff and/or their ability to work together is their project's major strength. Community support was cited as a major strength by 25%.

- Many projects expressed uncertainty about the methods of internal evaluation they might use.

SUMMARY

Educational Research Corporation has accomplished under the direction of Merrimack Education Center its four major service goals of surveying

project directors, training directors, providing individual consultation, and producing an evaluation booklet for future directors. These services were provided as part of the total effort of evaluating Title IV-C E.S.E.A. projects, which also included Chapter 622 projects. The effort not only focused on existing projects with their immediate needs and problems but also looked ahead to assist future projects and directors to meet better or to avoid some of the difficulties experienced with current programs. ERC therefore hopes that it has been of service to current programs and will also be of service to future programs through its efforts this past year. The next chapter reproduces another product of ERC used during the training sessions.

GUIDELINES FOR DESIGNING AN EVALUATION PROCESS

THE NEED TO PREPARE FOR TESTS OF VALIDITY

> You have just thought of a marvelous new way to teach art appreciation to elementary students. You've talked with a few of your fellow teachers and gotten them enthusiastic about the approach. Your idea sounded so worthwhile that when you informed your principal of the plan, the principal suggested that you develop a proposal for funding the program through Title IV ESEA. Your proposal was accepted and here you are with a dynamic idea, enthusiastic co-workers, and even a source of funding. How do you turn that sensational idea of yours into a viable program? How do you convert that enthusiasm and support into a solid, realistic aspect of the school curriculum? And suppose your program does become part of your school's curricula, how will you really know if the program does in fact, help elementary students better appreciate art? And suppose you do determine that students in your program develop a better appreciation of art, will your program do the same for students in other schools?

What you want to do is turn ideas into workable programs and more. Once you have set up a program, you will want to be sure the program is actually doing the things it is meant to do and you may even be interested in finding out if your program would work in other places. In determining if your program is doing what you want it to do, you are asking that your program have internal validity; in determining the applicability of your program outside its present setting, you are asking that your program have external validity. The first consideration, that of internal validity, is important to determine because you will want to know if your program has achieved the desired changes in the learners with whom you are working. The second consideration, that of external validity, addresses more general educational concerns. While it is helpful to establish programs which meet your specific school or district needs, it is more desirable to develop imaginative solutions to educational problems common to many communities, rather than to fund projects having meaning to one community only. It is thus important for you to design a program which (1) you can prove to be successful (has internal validity) and (2) can be used by others (has external validity). The information contained in this booklet is designed to assist you in converting your ideas into a program with internal and external validity. To achieve this goal, you will want to concentrate on:

- developing appropriate program objectives and,
- conducting your program within an experimental framework.

Before elaborating upon the details of these two areas, it is important to consider all the resources which you can call upon for assistance in developing your educational program. This booklet is only one resource you should be using. There is a host of written material on developing educational programs, writing program and curriculum objectives, and evaluating educational programs available in local or college libraries. Within this booklet, we provide some of the better-known materials used by educators so that you may address your specific problems.

Another area of assistance is your Title IV ESEA regional specialist of the Massachusetts Department of Education. The specialist can help you with specific problems or can refer you to other helpers.

Another area of assistance includes professionals dealing with educational research and evaluation. People with experience in these areas should be able to offer you assistance in helping you show that your program works. Such people may be in your own school district. If your district is relatively large, you may have planning, research, and evaluation units with people who could suggest approaches to take in developing your program. Your district may have individuals with relevant graduate course work or formal practice in program design. If you do not know of people with appropriate skills, your principal may be more familiar with the talents and experiences of people in the district.

There are two sources of outside assistance. One is the university professor or instructor; another is the private educational company. To find appropriate assistance at the university, contact the educational or social science department of your local college or university, state your needs, and then inquire if there are appropriate professionals who would be interested in consulting for you. Your local educational collaborative is also an excellent place to go to assist you in finding an evaluator. The collaborative has contact both with local university staff and with reliable education companies which specialize in the type of evaluation assistance you need. You may want to contact your district person in charge of federal funding for lists of approved evaluators. For example, Title I and special education offices both have such lists. If you use outside professionals, it is likely that there will be some sort of fee involved for consultation work.

The key to using any of the above resources in helping you design an effective program is to solicit help early, while your project is still flexible enough to incorporate those elements of planning and design necessary to ensure a well-developed program. It is too late, for example, to learn in March that the students participating in your program since October should have been pretested for baseline data before they participated in your program.

Regardless of your sources of assistance, you will want to become as well versed as possible in the techniques necessary for developing and conducting your new program so that you can guarantee that your ideas are being accurately translated into a viable program. While you may rely on others to know the intricacies of why one particular test is used over another to post-test your learners or why certain statistical procedures are applied to the data generated from your project, you will want to be familiar with basic considerations made about your project as it is translated into a sound experimental model. The next two sections are designed to give you basic information necessary for developing your new program.

PROGRAM OBJECTIVES

If we assume that you are the newly funded Title IV project director, you have already written a series of program objectives for the proposal which was funded. Some time has elapsed since those objectives were written and now as you start to implement your program, you should have a slightly better understanding of what it is that you want to do and what it is that you can do with your program. It is now time to review those program objectives, with the help of your evaluator and any other assistance available to make sure that the objectives state what it is that you really want to accomplish with your program. To illustrate by using the example of art appreciation for elementary students, you would want to be more concrete in specifying objectives than just stating:

POOR: Elementary students should learn to appreciate art.

While this may be a goal of the program you would have to define exactly what you wish to accomplish with the program. What you wish to accomplish would be stated as your program objective. For example, you might want students to recognize various art forms or you might want students to use specific art processes and techniques to express themselves. Your concept of the program may not even directly relate to student achievement. You may be more interested in training teachers to increase their commitment to art instruction. If this is the case, an objective might read as follows:

BETTER: Teachers will develop an art unit based on each of the ten forms of art discussed in the seminar series.

Whatever the objectives end up being, they should present a clear focus of exactly what it is that you want to accomplish with your project. Your objectives must be a realistic statement of what you expect to happen with the program. To understand what is realistic, consider each of the following areas as it relates to your program.

- The needs and abilities of your learners and participants.
- The staff you will have available to you in your program.
- The facilities and materials available or likely to be available to you.
- The availability of participants for the program.
- The length of time and level of intensity for working with your learners/participants.
- The cost of the program.
- The ability to determine if your objectives are being accomplished.

On the one hand you will want to make your program challenging and innovative so that its success would be a valuable contribution to the educational process, but, on the other hand, you do not want to set your objectives so high that it would be impossible to achieve them under the conditions within which you will have to operate.

Therefore, as you write each of your program objectives, think of it in terms of each of the above seven categories. Ask these questions of each objective. (The phrase "Do I have" can frequently be substituted with "Can I get"...).

1. What evidence do I have that there are people that need this training? Is the objective appropriate for the age level? interest level? knowledgeability of my participants?

2. Do I have sufficient teachers/lecturers/trainers? Are they qualified to work with this type of participant? Do they have sufficient interest or commitment to accomplish the objectives of the program? Do I need administrative assistance? Can I get this assistance?

3. Do I have the physical space for conducting these classes/holding the seminars/building this equipment etc.? Can the participants get to the program site? Are there teaching materials available? Do I or my staff have the capabilities for developing needed training materials?

4. Who are the people likely to be interested in the program? How will I inform them? How many people will the program

attract? Is this more appropriate for a volunteer or a captive group? Which type of audience will be available for my program?

5. How long do I have to accomplish the objective? one month? one year? three years? How frequently will I be able to work with the participants? Will this be a reasonable time to accomplish the objective?

6. How much will it cost for the appropriate facilities? materials? staff? participants? time?

7. How can I test this objective to see if it is accomplished and to what degree? Has the objective been stated in such a way that I can measure it?

Now that you have answered each of these questions for each of your objectives and have modified your objectives so that your responses are realistic, think about your objectives and your answers in terms of other schools or districts. Would these objectives be valuable and desirable for other schools or districts or are they simply solving a unique problem for you? Obviously you would want most or all of your objectives to be objectives other educators would find useful for solving some of their problems. Look back over your answers to each of the questions. Are there certain features--availability of facilities, characteristics of participants--that would not likely be found in other classes, schools, or districts? If you answer is "yes" to this, then you would want to consider modifying your program so that your program is no longer a unique answer to a unique problem but is a reproducible process addressing a general educational concern.

One final caution in writing your objectives is that you should have a reasonable number of objectives. If you end up with sixty objectives for your program, you either have unbelievably extraordinary resources available to you or you are writing your objectives in too much detail. Your objectives are probably too specific. To use the art appreciation project, an unsuitable program objective would be:

POOR: 80% of participating third graders shall successfully identify Michelangelo's "Moses" as a sculpture.

To correct the problem of overly detailed objectives, you would generalize from this and similar objectives to one program objective such as:

BETTER: Students will identify various art forms appropriate to their grade level.

The point to remember when writing program objectives is that they are just that--program objectives. On the one hand they are not program goals so they must be specific enough to be able to measure, but on the other hand, they are not curriculum objectives which would be very specific statements such as our "POOR" objective about Michelangelo's "Moses." Program objectives fall somewhere between goals and curriculum objectives with regard to specificity. They must be general enough to state concisely the major expected outcomes of the program but also specific enough to represent a measurable outcome.

PROGRAM DESIGN

Now that you have your objectives clearly and appropriately stated, you are ready to design the operation of your program. You have two primary considerations in setting the considerations for your program. They are:

- Designing the program to meet its objectives.
- Designing the program to test the degree to which it has met its objectives.

Designing your program to meet its objectives will not be covered here because of the great diversity of Title IV programs. Each set of program objectives would be very different. However, incorporated within the design of the program are certain conditions and procedures vital to the testing of the program to determine to what degree it has met the objectives.

Before discussing these features, it is helpful to know just why the testing of the program is as important as establishing and conducting the program. It is sometimes hard to remember with programs of our own, ones we have developed and monitored through the difficult planning and start-up phases, that program objectives may not be achieved or that they may be achieved due to other factors, such as student motivation, rather than the program itself. We must not assume a program will be a success--those not committed to the program certainly will not assume success. We must prove success. This need for proof is vitally important for a Title IV innovative program and an absolute necessity for a program which we want other schools or systems to replicate.

Proof of success is a difficult task in the educational field. There are, however, certain elements you can incorporate into the program design to provide evidence that it did produce the changes it was intended to produce. These elements are:

- Comparison group -- a group which does not receive treatment (instruction) in your program as opposed to the experimental (or treatment) group which does participate in your program and with whom you are trying to change in some way. (Comparison groups are also referred to as control groups.)

- Randomization -- the assigning of learners to the comparison group or the experimental group with equal probability that any one individual could end up in one group or the other.

- Pretesting* -- the administration of a procedure such as a test, survey, or observation, at the beginning of a program to ascertain certain characteristics of treatment and comparison individuals involved in the program. This establishes your baseline data which tells you what your participants know or do before the program begins.

- Post-testing -- the administration of a procedure at the end of a program to both treatment and comparison participants to ascertain certain characteristics of participants involved in the program regardless of whether they received treatment in the program.

The reason for complicating your program with things like a comparison group and randomizing learners/participants into comparison and treatment groups and so forth is to reduce the chance that something which looks like a successful result of your program can be attributed to an effect explained by other factors. If a change is observed at the end of your program, you want as much evidence as possible to document that your program, rather than some other effect, produced the change. This is what is meant by determining internal validity. By applying the features of a comparison group, randomization, and pretesting to your project, you can increase the internal validity of your project.

We will first discuss the factors which must be controlled so that your program will have internal validity. Then, with this background, we will assist you in designing a program which reduces these effects.

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*See appendix for guidance in testing if you are going to use standardized tests for your pretesting and post-testing.

SOURCES OF INTERNAL INVALIDITY

Assume you have completed your program and have noted significant changes in your participants. Did your program cause these changes or could your changes have been caused by any of the following factors?

1. Concurrent historical events. Something may have occurred outside your program which influenced your participants.

   EXAMPLE: (Using your art appreciation project...) A robbery at the local museum occurred during the time of your program and much attention was given to the valuable and irreplaceable nature of the works of art stolen.

2. Maturation. A physiological change takes place with or without a specific program as a result of the normal passage of time.

   EXAMPLE: Most first graders learn to cut along curved lines because of development in their motor coordination during this age.

3. Testing. Participants do better or worse on a post-test merely because they have taken a pretest.

   EXAMPLE: Your sixth grade students answer post-test art attitude questions much more positively because they have been sensitized to what you are trying to achieve in your program at the time of taking the pretest attitude inventory.

4. Instrumentation. The conditions under which initial observations were made are different from the conditions for final observations.

   EXAMPLE: Your art attitude inventory was inconsistent; the same student could take the same test within some minimum time period even without participating in any program and get radically different scores.

   EXAMPLE: You had reviewers rate the effectiveness of units prepared by both before and after teachers participated in the program, but the initial reviewers included several people with art history background while the final reviewers did not have comparable backgrounds. The initial reviews were more critical than the final reviews.

5. Regression to the mean, or statistical regression. Students scoring at the very high or very low ends on a test will most probably score closer to the test mean the second time they take the same test.

   EXAMPLE: For your program you took the 10% of the students scoring lowest on an art achievement test. Regardless of when the students take the achievement test and regardless of what happens to them in an art program, their average scores are likely to be higher at a second testing. The explanation for this is that students scoring at the very high or very low end of the scale obtain part of their scores as a matter of luck, in this case bad luck. In retaking the same test, the luck element would change so that in all probability they would not have as much bad luck, that is they would score higher, regardless of when they took the test again and regardless of whether they participated in the program or did not participate. (The opposite would happen to very high scorers. They had received very high results as a matter of good luck and on re-testing would get, on the average, lower scores.)

6. Differences in selection of participants for comparison and treatment groups. Participants receiving treatment are significantly different from participants in the comparison group on significant variables.

   EXAMPLE: Your teachers receiving instruction on how to prepare course units were selected partially because they had experience in fine arts curriculum development,whereas those not participating (those in the comparison group) had no previous experience. It would not then be appropriate to compare sample course units from the two groups to determine if program participants learned how to prepare units better.

7. Experimental mortality. Participants differentially drop out of the treatment and the comparison groups in your program.

   EXAMPLE: Your program is based on programmed instruction. As students successfully complete their training, they leave the program. At the end of the year, you post-test the students currently in the program and compare them to the same comparison group

you had in the beginning of the program. You did not have an opportunity to test all the successful students who left the program during the year so your average student test score does not show as significant a change as it might otherwise have.

In addition to these seven factors which could lead to invalidation of your program effects, there could be interaction effects of two or more of these factors. Other factors, usually, history, maturation or testing, interact with the selection of participants in comparison and treatment groups to produce a change which is not attributable to the program.

Now that you are aware of the factors which may invalidate evidence that your program has achieved its goals, let us examine the ways in which you should design your program to minimize these factors. You would want:

- to have one group of participants/learners receiving the benefits of your program and a similar group which is not receiving benefits from your program, and
- to assign participants/learners randomly between the two groups.

Using the Comparison Group and Randomization

By having potential participants in your program randomly assigned (not necessarily in equal numbers) between a comparison group and a group which will have the full benefit of your program, you can safeguard against most of the difficulties encountered in obtaining internal validity. As a result you will be better able to show that any changes occurring in your participants are a result of your program and not extraneous factors such as maturation, biased participant selection, such as volunteering, and so forth. Unfortunately, random assignment does not control for all of the internal validity factors but to design a school program which could completely control for each of these factors is beyond the scope of this booklet.

How do you obtain randomization? - The key is to have your population, from which your participants will be determined, ready before your program begins. This may involve extensive advertising before your program begins or it may require soliciting the aid of administrators or teachers for referrals.

Once you have your population defined, randomly assign potential participants (students, classes, teachers, or whatever) to one of two groups--those who will take part in your program and those who will serve as a comparison group. If you will be relying on volunteers, state during the volunteering process that only a portion of those signing up for the program will be able to participate. After you have your list of volunteers, randomly assign each to one of the two groups. Random assignment is usually done in one of several ways: flipping a coin to see if a participant is in the treatment or comparison group; using a random numbers chart to select two groups from a larger group; drawing names from a hat to place people in treatment or comparison groups. Once you have your two groups, be sure to retain the list of people in your comparison group for your post-test purposes.

The one consideration you must always keep in mind in forming your two groups is that they must come from exactly the same population. Dividing a class into those who volunteer to attend your program and calling the others in the class your comparison group is not random selection. Random assignment involves a process like putting all names in a hat and blindly drawing out one name at a time until you have the number required for your program. The remaining names would be your comparison group.

What do you do with a comparison group? The comparison group and your program participants should have exactly the same experiences except that your program participants are exposed to your program and the comparison group members are not.

In more exotic program designs the comparison group might receive a parallel treatment under the same condition that the program participants experience. For example, if you pull a sample of elementary students from class every Friday to receive an hour's worth of art appreciation instruction, you would at the same time remove the comparison students from the regular class and give then an hour's worth of instruction in a totally unrelated area--maybe science or remedial reading. If both treatment and comparison groups are pulled from their regular classes, they are being treated more equally than if just treatment individuals are removed from the regular class.

To Pretest or Not To Pretest

If you have, indeed, assigned students randomly to the treatment or the comparison group, you should probably not pretest. Giving students a pretest may influence their response to the program; that is, the pretest would become part of the learning experience. It would then be difficult to generalize the results of the program to populations which may later participate in the program but may not receive pretests. For example, if you wanted to test whether use of your newly-designed curriculum unit helped to reduce stereotyped attitudes, you would

probably not want to pretest your subjects on stereotyped attitudes before exposing them to the units. They would likely become sensitized to the things you were going to teach them and the comparison group would certainly be sensitized to what was happening. Post-testing your participants and the comparison groups would be sufficient to determine whether the unit had an effect on your participants. If you found significantly different post-tests between the two groups, you could then generalize your findings to populations similar to your participants without having to worry about whether that pretest affected your participants' attitudes.

If, however, your potential pretest is a regular part of the general educational program, use of the pretest would probably not adversely affect your program. In fact, you would want to compare pretest scores of treatment and comparison groups to be sure that their average scores were the same and hence that the two groups are comparable. Another convenience of pretest is that those results together with post-test results allows the analyst to use more powerful statistical procedures in data analysis. We assume, of course, that if pretests are used, the appropriate tests will be chosen and that they will be administered correctly.

A Word About Post-Testing

The procedures you use to determine whether your program has had an effect on your participants do not have to be paper and pencil tests. Observations, interview procedures, or school records, such as attendance data, are some of the alternatives to standard testing procedures. Whatever the method(s) necessary for your program, remember that both your participants and the comparison group must be post-tested by interview, observation, or whatever.

There should be absolutely no distinction made between taking final data from the participants and taking final data from the comparison group. For example, if you individually interview at the end of the program, you should use the same interviewers for individuals from both treatment and comparison groups. In fact, it is better if the interviewers do not know whether they are interviewing a treatment or a comparison person.

What do you do if participants drop out of your program? First, you want to ascertain if there is something systematic about the dropouts. Did they dislike the program? Did they "graduate?" If you have pretest data available this might be useful in identifying any trends. Secondly, you should probably include dropouts in your end of program post-testing even though this would probably give you a conservative estimate of the effects of your program.

EXTERNAL VALIDITY

Let us suppose that you have designed your program using the techniques of randomization, comparison groups, and appropriate testing situation. Let us further suppose that you are able to determine whether or not your program is accomplishing what it proposes to do, that you are able to tell that your program solves the problem particular to your school or district. However, you want to have your program also make a greater contribution to educational advancement than just solving a local educational problem. You want to know if your program would be of value to others. Are there other places which have the same problem your program is designed to solve? Would your program produce the same outcomes elsewhere?

The questions you are asking now relate to the issue of external validity. How generalizable is your program? If the program works for you, will it work for others? There are no formulae for ensuring that your program is externally valid but there are factors to consider in determining whether your program would be useful elsewhere.

If we assume that your program is responding to a need that is not unique to your situation but that could be found in many other educational situations, the next consideration is whether these other educational settings would have the resources and the environment necessary for conducting a similar program. You would, therefore, have to review the human resources and material resources to see if other settings could supply similar resources and you would want to see whether the climate under which you would begin and conduct your program is dependent on certain political factors which are likely to be reproducible. You might want to ask some of the following questions to stimulate your thinking about how applicable your program would be in another setting.

- Are my resources available elsewhere?
- What are the particular features of my learning population? Is the program aimed at a specific age level? achievement level? family background grouping? How many learners can/must my program accommodate?
- What are the particular features of my staff? Must my instructors have certain qualifications, training of experience? What types of support staff are needed to complement my program instructors? Will my program rely on specialized consultants?

- What types of equipment and materials are necessary for the program? Will I have to develop specific training materials? Will the program depend on having certain commercial instructional materials? What types of physical facilities will be program require?

- Is a certain type of climate necessary for the operation of the program? What type of political support is needed to have the program adopted?

In answering these and related questions about the needs of your program, think of other settings you are familiar with in Massachusetts and in the country at large. Would these other settings have similar resources and climates? The more settings that have these resources and climates, the more generalizable is your program. That is, the greater its external validity.

There is one other aspect to the issue of external validity for your program and that has to do with the experimental nature of your new program. Essentially this means that for your program to have external validity, success of your program cannot be dependent on your program being an experiment. For example, would your program have the same outcomes for populations where no pretest (which might sensitize participants) is administered? Would participants respond to a program which has been in the system for several years in the same manner as they responded to an innovative program?

The issue of external validity is important especially in developing a viable Title IV program because you want to make a contribution not only to your local system but to other educational systems. The more your program addresses general educational needs and the more care you use in developing your program so that it is feasible for other systems to adopt or adapt, the greater the likelihood that your Title IV innovative program will have a significant impact on education.

SUMMARY

To establish a good program it is not necessary that you become a full-fledged evaluator, but it is important that you become familiar with some of the elements that go into designing a program that can document for itself its degree of success. This booklet serves to give you the basis for establishing just such a program by highlighting the two major areas necessary for developing sound programs. The areas are:

- developing appropriate program objectives

- conducting your program within an experimental framework

Only through developing a sound program can you be sure that your Title IV program has both internal and external validity; that is, that your program accomplishes what it says it is supposed to be doing and that it is applicable to other situations.

That your program have internal validity, that it document its successes, is important for any program to do. To help you obtain internal validity for your Title IV program, we suggest that you model your program with a treatment group and with a comparison group and that you assign participants by chance (randomly) between the two groups. Before the program begins you collect all necessary data from both groups to demonstrate the degree to which they possess the characteristics that you will be wanting to change through participation in the program as long as the process of collecting the data does not form any sort of teaching of the participants and as long as it does not sensitize the participants to what you expect to do with your project.

During the course of your program, people in the comparison and treatment groups should be treated exactly the same and have all of the same experiences except that your treatment group participates in your program and the comparison group does not. Other than program participation your two groups are equal.

At the end of your program, you should test all people in your treatment group and in the comparison group for all of the changes that you expect your program to produce in those who participated in it. With this basic program design you will be able to document to a better degree if your program is producing the changes you want it to produce.

That your program have external validity, that it be generalizable, is especially important to Title IV projects. In this booklet are suggested topics to consider when viewing the educational problems your project is attempting to solve and the means you will use in solving these problems. The basic questions to ask for external validity are:

- Is your project addressing a common educational problem?
- Would others be able to do the same sorts of things that you will be doing in your project?

One final reminder as you begin the process of implementing your project is to urge you to seek help from those specializing in project evaluation. There obviously is more to developing a project than what is contained in this booklet or even in what is contained in the references noted throughout. There are also times, although a lot less frequently than what you will want to think, when the model we have described is inappropriate to use for a project. For these and other reasons the evaluation specialist can be of great assistance to you in formulating and verifying a successful project.

FOCUS ON VALIDATION

THE STRUCTURE

While much has been written and discussed about the validation process, specific and practical validation materials are not easy to come by. Merrimack Education Center has produced a validation process which was tested using the Individually Guided Education program. MEC's validation products are reproduced here since they were a part of the materials reviewed by the project directors. This chapter carries in detail the results of a validation process undertaken in the Chelmsford Public Schools from the fall of 1971 to the end of September 1973. The next chapter is based upon a simulated validation process.

This chapter, and the preceding one, review two key elements in the useful development of innovative programs: evaluation and validation. Tradition and familiarity are the twins that seemingly assure the survival of "regular" school programs. New Programs and ideas can rarely expect acceptance and a degree of success unless they in turn adopt evaluation and validation as their twins. Any new program expected to last longer than a season or beyond the end of soft money must gird itself for the inevitable contest.

We begin with a brief project summary, followed by sections on program outcomes, effectiveness, exportability, and budget requirements.

PROJECT SUMMARY

It will be useful for you to have an overview of the project upon which this validation process was based. Thus, the following summary of the project is offered.

Individually Guided Education (IGE) may be defined as an inservice program for elementary school personnel that leads to individualized instruction. It is long term in nature, requiring three to five years for a specific league to accomplish a majority of the outcomes.

The total IGE inservice program centers around four components:

- The Multiunit Organization -- This plan couples a team teaching approach, utilizing team leaders, with pupil assignment on a multiage grouped basis. This decision making structure allows many decisions to be made by the Instructional Improvement Committee, a group composed of the unit leaders and the principal.

- The Learning Program -- This component is the heart of IGE. Subcomponents include the diagnostic prescriptive approach, use of specific objectives, assessment, multi-media materials, emphasis placed upon pupil selection of materials and objectives, fitting the activity to the learning style of the pupil, and allowing the learner to proceed at his own rate.

- Home-School Communication -- Emphasis is given to developing a planned program of community involvement. This component includes not only explaining the program to the parents but also encouraging them to participate in it as volunteers and aides.

- League Linkages -- Individually Guided Education is implemented in several schools in a geographic region with an intermediate agency as the facilitating agent. Linking of schools in this manner provides a source of peer support, an exchange of ideas, and a temporary social system that can enhance the implementation. The intermediate agency gives legitimacy to the implementation and provides the coordinating element.

MAJOR PROGRAM OUTCOMES

List the major program objectives upon which your project is based. These objectives should reflect any formal changes that have been made since the submission of the original proposal.

Project Objectives

1. Program Area: Staff Development

Leadership training for principals and unit leaders of the league is a comprehensive ongoing process of renewal. Indeed, Individually Guided Education is defined as an inservice program for elementary school personnel that leads to individualized instruction for students.

Objective One -- To provide implementation training programs, using appropriate training materials for administrative and instructional personnel of the League schools, as well as parents, in order to:

- Build group identification

- Develop staff commitment to innovative behavior
- Help staff become familiar with IGE materials, objectives, and strategies
- Facilitate parent understanding and support for IGE

Enabling Objectives:

- To identify and develop leadership capabilities and potential in teachers, unit leaders, and administrators
- To select and/or develop training programs for League schools targeted to the following populations--principals, superintendents, teachers, unit leaders, and paraprofessionals
- To evaluate the IGE materials and strategies and monitor utilization

2. Program Area: Communications Network

To build information exchange channels at various levels including external and internal dissemination.

Objective Two -- To establish a "League of Schools" characterized by a coordinated program of interaction and training. A league should provide peer support, a communication network, research assistance, and service support. League information should be disseminated to other regional schools.

Enabling Objectives:

- To increase parent participation and support for IGE objectives
- To maintain and update an educational clearinghouse on resource people, successful practices, and information
- To provide trained individuals from a League agency who will serve as field agents
- To disseminate information to League schools and other target audiences

3. Program Area: Support Services

Support services for marshalling internal and external resources to meet identified needs. Needs are identified and resources brokered to meet those needs.

Objective Three -- To assist teachers in developing the skills related to the IGE Learning Cycle (assessment, general and specific goal setting, planning diversified learning experiences, reassessment, and recycling); and to assist teachers in implementing an IGE instructional program.

Enabling Objectives:

- To identify needed support systems and services in implementation of the 35 IGE outcomes
- To target specific resources according to the needs identified. These will be in the form of successful practices, human resources, and targeted information products
- To establish effective linkages with external programs and resources. (Colleges and Universities, I/D/E/A-Kettering, University of Wisconsin, and State Department)

4. Program Area: Evaluation

Monitor, assess, and evaluate implementation of IGE in Project League schools.

Enabling Objectives:

- To provide three to five Peer Process evaluations in selected schools
- To maintain anecdotal records on league activities
- To develop the multiunit concept in each of the league schools by assisting league leaders to develop skill and confidence in school-wide decision making; assisting league teachers to develop the ability to use the Unit approach in organizing the instructional program; to provide consultant analytical services to league schools from various agencies

THE EFFECTIVENESS OF THE ACTIVITIES

The League Process identifies and develops leadership capabilities and potential in teachers, unit leaders, and administrators. Training programs for League schools are developed and targeted to the following populations:

- Principals
- Superintendents
- Teachers
- Unit Leaders
- Paraprofessionals

Project League provides implementation training programs, using appropriate I/D/E/A materials for administrative and instructional personnel as well as parents, in order to:

- Build group identification
- Develop staff commitment to innovative behavior
- Help staff become familiar with IGE materials, objectives, and strategies
- Facilitate parent understanding and support for IGE

A regularly scheduled series of workshops, conferences, and educational exhibits is established by the League. These consist of HUB meetings, courses on Wisconsin Reading, SCIS, and the like, principal-unit leader workshops, and programs for teachers. Table 6 indicates a comprehensive scheduling of these activities.

TABLE 6

PROJECT LEAGUE MEETING INFORMATION

TOPIC	DATE	PLACE	NUMBER AND TYPE OF PARTICIPANTS
Behavioral Objectives	9/09/71	Billerica	60 Principals, Teachers, and Unit Leaders
P/UL Workshop on 35 Outcomes	12/13/71	Andover	60 Principals and Unit Leaders
Individualized Instruction Materials Exhibit and Guest Speaker on Management Systems	11/02/71	Westford	125 Principals, Teachers, and Unit Leaders (Dinner Speaker = 45 Persons)
Massachusetts Association for School Principals "IGE" -- Elaine McGregor	10/13/71	Amherst	8 Principals
IGE Superintendents and Principals "Problems, Needs, Concerns, Resources"	12/09/71	Andover	20 Superintendents and Principals
P/UL Workshop on "Problems, Needs, Concerns"	11/27/71	Andover	50 Principals and Unit Leaders
IGE Superintendents and Principals Sharing Successful Practices	1/26/72	Lowell	Superintendents and Principals
Principals' Meetings	Monthly		
Unit Leader Consultants from Wisconsin and Colorado		School Buildings	All Staff Members
Monthly HUB Meetings	9/14; 10/05; 11/09; 12/07; 1/11; 3/14; 4/04	MEC Office	13 Teachers and Unit Leaders

Table 6
Project League Meeting Information
(Continued)

TOPIC	DATE	PLACE	NUMBER AND TYPE OF PARTICPANTS
HUB Ad Hoc Committee Progress Reporting Systems	6 meetings	MEC Office	8 Teachers and Unit Leaders
IMC Specialists Operating the IMC	3 meetings	Schools	10 Specialists (Librarians, Audio-visual Personnel, etc.)
Parent Advisory Committee Informational Needs Assessment Home-School Communications	3 meetings	MEC Office	13 Parents
	OTHER LEAGUE ACTIVITIES		
All League Educational Fair 16 Big Ideas Selected by Participating Schools	5/31/72	School and Rolling Green	125
Summer Course - Graduate Course for Unit Leaders (In Conjunction with Fitchburg State College)			
Principals' Meeting - IPI	5/25/72	MEC Office	40

Table 6
Chronolog--Conferences, Workshops, Meetings (1973-74)
(Continued)

DATE	PURPOSE	TITLE TOPIC	PARTICIPANTS
September 12/72	Monthly Meeting	Continuation Grant	Principals
September 26	Monthly Meeting	Newsletter	Newsletter Committee
October 1	Planning Meeting		Libby O'Connor, John Allen
October 3	MESPA	Dr. Glaser	Principals
October 3	Monthly Meeting	1972-73 Planning	HUB Members
October 5	Peer Process	Plan Visits to McKay	
October 5	Wisconsin Study Skills		McKay Teachers
October 10	Cohasset	IGE Dissemination	Principals
October 12	Peer Process	McKay	
October 16	Monthly Meeting	Planning Committee	Principals
October 17	Learning Styles		Shattuck Street School
October 17, 18, 19	Wisconsin Facilitator Training		
October 19	Mass. ACE	Title III	
October 23	Monthly Meeting	Newsletter	Newsletter Committee
October 24	Peer Process		McKay and Principals
October 25	Fitchburg		
October 27	Al Cullen	Motivation	Teachers, Unit Leaders
November 8, 9, 10	Principals' Workshop		
November 14	Monthly Meeting	Successful Instructional Materials	HUB Members
November 15	Parent Advisory Committee		
November 16	Peer Process	McKay	

Table 6
Chronolog (Continued)

DATE	PURPOSE	TITLE TOPIC	PARTICIPANTS
November 18	Learning Styles	Unit Meeting	Principals
November 20	Monthly Meeting	Unit Meeting	Principals
November 21	IGE Dissemination		Lawrence (Primary School)
November 27	Monthly Meeting	Newsletter	Newsletter Committee
December 5	Monthly Meeting	"What's Happening"	HUB Members
December 6	Planning	IGE National Convention	
December 11	Monthly Meeting	"Learning Modes"	Principals
December 13	Parent Advisory Committee		
December 14	Monthly Meeting	Newsletter	Newsletter Committee
January 1/73	IGE Overview		Methuen Teachers
January 9	Monthly Meeting	League Evaluation Design	HUB Members
January 10	Monthly Meeting	Newsletter	Newsletter Committee
January 11	Behavioral Objectives	Storrow School	
January 18, 19, 22	Monthly Meeting	Individually Guided Motivation Unit Leader Training	Principals
January 29, 30	League Evaluation		Vaughn
January 31 February 1, 2	Principals/Unit Leaders		Vaughn
February 6	Monthly Meeting	Reading Skill Packages	HUB Members
February 6, 7, 8, 9	Atlanta Conference		
February 7	Monthly Meeting	Newsletter	Newsletter Committee
February 12	Monthly Meeting	IIC Functioning	Principals
February 13		IGE Overview	
February 14	Paraprofessional Workshop		Winslow

A major role has been assigned to League principals as is shown in Table 7 -- Project League Principals' Meeting Agenda. This table indicates that the meetings are designed to assist principals in their leadership functions, provide for exchange of ideas and decision making; contribute to self-renewal processes of both the principals (as individuals) and school building IGE programs.

TABLE 7

PROJECT LEAGUE PRINCIPALS' MEETING AGENDA TOPICS

DATE	AGENDA TOPICS
9/16/71	1. Explanation and discussion of ERIC Information System 2. Administrative details 3. MESPA program at Amherst 4. IGE monitoring by principal and by MEC 5. Review of preschool workshops 6. IGE implementation problems a. When more than one curriculum area is being individualized b. When, within one school, units are individualizing different instructional areas
11/11/71	1. MEC Staff: Reflections and observations 2. Role of principal in individualizing instruction: Dr. Robert Anderson 3. Social hour, dinner 4. League principals' IGE quotient to date 5. Planning and programming for IGE implementation
12/13/71	(Principals and UL's Joint Meeting) 1. Plan for continued implementation of IGE 2. Look ahead to September 1972 3. Collect building implementation matrices

Table 7 (continued)

DATE	AGENDA TOPICS
1/26/72	(Principals and Superintendents Joint Meeting) 1. Lunch 2. Future implementation strategies 3. Perceptions of the present; alternatives for the future
2/17/72	1. Peer evaluation process a. General information b. Procedures c. Development of evaluative criteria d. Implementation steps
3/23/72	1. Title III feedback 2. Peer evaluation report 3. Inservice materials
4/26/72	1. Administrative announcements a. Budgets b. I/D/E/A evaluation c. IGE contract d. Wisconsin study skills e. NEPTE proposal 2. Independent audit 3. Grouping and scheduling 4. Other
5/17/72	Evening meeting with evaluation team: feedback session
6/2/72	Social meeting planned for league principals & facilitator

Table 7 (continued)

DATE	AGENDA TOPICS
9/12/72	1. Continuation grant report a. Field agent plan b. HUB committee c. Peer evaluation d. Budget allocations 2. Planning committee, 1972-73 3. Inventory of inservice materials 4. IGE curriculum areas 5. Preschool workshops
10/16/72	1. Planning committee report 2. Identification of topics for future meetings 3. Schedule for future meetings
11/20/72	1. Use of audio-visual material -- "Unit Meeting" 2. Guidelines for visitation 3. Storrow School program report 4. NDEA Title III proposal development 5. Peer process
12/11/72	1. "Learning Modes" 2. Involvement of teachers 3. Harrington School progress report 4. Social hour, dinner
1/22/73	1. "Parent Information Center" 2. "Communication with Parents" -- filmstrip 3. "Unit Leaders Training" 4. Woburn Street School progress report
2/12/73	1. "Many Roads" 2. IIC functioning 3. Col. Robinson School progress report

IGE implementation guidelines suggest that each League organize a HUB Committee, representing teachers and unit leaders, to develop communication and sharing of resources. Project League's HUB Committee consists of representatives from each school, working with the League Facilitator, meeting monthly. Table 8 shows the HUB Committee agenda topics.

TABLE 8
PROJECT LEAGUE HUB COMMITTEE TOPICS

DATE	AGENDA TOPICS
9/14/71	1. Plans for all League meetings scheduled for October 26, 1971 2. MESPA meeting at Amherst 3. Newsletter 4. Information exchange a. Identification of successful practices b. Resource people c. Problem areas 5. Plans for next meeting
12/7/71	1. Announcements 2. Problem sharing 3. Sharing of successes 4. Plan for League Project 5. Other
1/11/72	1. 1972 organization 2. Principal's/Superintendent's meeting, 1/27/72 3. Ad hoc committee on reporting pupil progress 4. Other

Table 8 (Continued)

DATE	AGENDA TOPICS
2/4/72	1. Review of material for reporting 2. Test bank ad hoc committee 3. Specialists unit
3/14/72	1. Announcements 2. Test bank report 3. Committee reports 4. All league meeting 5. Other
4/4/72	1. Announcements 2. Planning all league conferences 3. Other

Five HUB Committee meetings were planned and five were held. The agenda items were cooperatively prepared and HUB representatives were encouraged to seek input from their respective IICs. In addition to contributing to the planning of two all league meetings, the HUB Committee organized two ad hoc committees. HUB Committee activities were given very positive ratings by both principals and unit leaders as they evaluated League operations.

TABLE 9

PROJECT LEAGUE HUB COMMITTEE MEETING AGENDA TOPICS

DATE	AGENDA TOPICS
10/3/72	1. 1972-73 organization and planning 2. Monthly newsletter
11/4/72	1. Exchange of news items 2. Sharing of successful instructional materials in IGE programs
12/5/72	1. Planning for 1973 2. Small group discussion--"What's Happening?" 3. Newsletter
1/9/73	1. Review and discussion of League evaluation design 2. Mini-grants 3. Report from superintendent conference planning committee
2/6/73	1. Reading skill packages 2. Winslow School progress report

One objective was to provide sufficient information to the public so that the IGE/MUS-E innovation was seen as acceptable to the community. A parent information center with appropriate mateirals has been developed and installed in several of the schools. By June all of the schools had done so. Project staff members made themselves available to answer inquiries from outside the project as well as plan suitable activities to disseminate IGE/MUS-E within the region. Monthly newsletter, IGE/MUS-E micropaks, workshops, HUB meetings, resource exchanges, and ERIC services have all been provided in an effort to support the dissemination of IGE/MUS-E.*

Innovative programs depend upon many groups for survival and success. Parents and citizen-taxpayers need to understand in order to support. Through Parent Advisory Council meetings, both by individual school building and on a League basis, some of this communication is provided. Printed publications through newsletter format and news releases to local papers are also indicated here. Teacher aides, often community representatives, are advocates of the schools. Additionally, the League has instituted a series of meetings in each individual building led by a member of the Parent Advisory Committee for the League, a parent in an IGE school, who has been instrumental in assisting each school to set up a parent information center to display attractive brochures and visuals that have been designed for this purpose.

Information regarding Parent Advisory Committee meetings can be found in Table 6 in addition to the monthly publication of the League Newsletter.

On-site visitations have been made to each building by the League facilitator. Six of the League schools have been visited by the Linker field agent; individual building workshops have been held on Learning Styles or the Wisconsin Reading Design on four separate occasions. Leaders of these latter workshops were MEC staff members.

MEC staff is prepared to fill microfiche and hardcopy orders for documents on a daily basis. Each school has an information service subscription and can call and order documents listed in the League Newsletter or in their monthly issues of Resources in Education. Table 5 indicates an exemplary listing of materials that has been disseminated to IGE schools as part of their ERIC subscription service.

League dissemination activities have been expanded to include overview conferences and information conferences and workshops on several occasions. (See Table 10 for Information Dissemination.)

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*IGE -- in the multi-unit school - elementary

TABLE 10

INFORMATION DISSEMINATED

I/D/E/A Learning Styles

I/D/E/A Assessment Booklet

"Specialists in IGE" (filmstrip)

List of Local Resource People (IGM)

Assessment Bibliography

IGE Newsletter

ALERT Summaries (IGE, IMS)

Wisconsin Curriculum Series

Learning Styles Booklet

List of Computer-generated Searches

Project League Inventory of Materials

ED 148 - Educational Psychology Course Outline

Staff Development Brochures

Parent Information Brochures

Home and School Bibliography

Educational Information Shop

Individualized Instruction Bibliography

PREP Summary

Education U.S.A. Summary

Education Recaps

Individualized Instruction CEDAR Report

"Can Schools Up-date Their Approach to Education?"

An annual needs assessment is administered in each of the schools; a survey questionnaire designed to determine the familiarity of the professional staff members on all educational concepts is analyzed. The survey has revealed strong interest in successful practices and curriculum guides. Attempts have been initiated to share successful practices through the HUB exchange and through principals meetings. Workshops in Individually Guided Motivation and motivating pupils for learning have been held this year.

Once particular needs of a given school are identified, activities are set into motion to resolve the particular problems. School visitations by the League Facilitator have been instrumental in this concern in addition to the scheduled conferences, workshops, and meetings. On-site visitations, information exchange networks, and staff development programs are seen as the primary activities and procedures for this objective. The League Facilitator has participated in a National IGE Conference which examined these same issues on the broader scope of schools in many states implementing IGE.

Important tools for disseminating information about IGE are the handbook, Implementation Guide, filmstrip sets, and films. These materials are to be used in a variety of ways during P/UL and staff workshops. The materials are designed to transmit information, develop skills, stimulate discussions, help change attitudes, and minimize misperceptions. The materials also are to play an important role in the self-improvement process. Since it is assumed that IGE will not be implemented easily, the materials are also designed to be used in a continuous self-improvement process. Table 11 shows teachers' and unit leaders' responses to the question, "What materials have been helpful in preparing you for IGE?"

During the first year of Project League, the Marsh School volunteered to undergo a Peer Process evaluation by a team of principals. In the second year of IGE implementation, the McKay Campus School and the Robinson School had already participated in the Peer Process evaluation. Dates of visitations to the McKay are listed in Table 1. Other schools scheduled are Harrington and Storrow. Additionally, information regarding the resolution of the Peer Process and final feedback sessions will be provided to the visiting on-site evaluation team upon request. Table 12 lists the steps in the Peer Process. See Table 13 for description of other evaluative procedures.

TABLE 11

MATERIALS MOST HELPFUL IN PREPARING INSTRUCTIONAL STAFF MEMBERS FOR IGE

MATERIALS	FREQUENCY OF RESPONSES	PERCENTAGE
1. I/D/E/A Handbooks	47	33
2. Filmstrip Sets	35	24
3. Films	33	23
4. Name	11	8
5. Implementation Guide	8	6
6. Other	6	4
7. IMS Materials	3	2
TOTALS	143	100

The filmstrips and handbooks are available to the building staffs. They are, with a few exceptions, kept in the individual IMC or library. When principals were interviewed and asked, "How are they (inservice media) used?" their responses varied from, "We refer to them constantly!" to "They're never used." On the whole, with the exception of one or two schools, the I/D/E/A inservice materials appear to be used very sparingly. While two school principals reported that program growth was being measured by referring to the outcomes (in the Implementation Guide), the evaluation team did not find evidence that the inservice materials were being used in a planned program of self-improvement. The school staffs appear to see very little relationships between the concepts and practices illustrated and taught and in the media package, and the problems they faced in Individually Guided Education.

TABLE 12

PEER PROCESS OF EVALUATION

Outline of Evaluation Process

I. Pre-visitation
   - A. Self-inventory
   - B. Preparation of questions, problems, concerns or achievements on which local school wants feedback
   - C. Conference with visitation team to agree on contract

II. Visitation

III. Visitors hold strategy session
   - A. Consolidation of data
   - B. Assessment and evaluation
   - C. Preparation of strategy for feedback conference

IV. Feedback Conference
   - A. Contract Fulfillment
   - B. "Bonus"

V. Post Mortem by
   - A. Local School
   - B. Visiting Team
     1. Assess and evaluate their own effectiveness
     2. Draw larger implications

VI. All League sharing of successful practices identified

TABLE 13

FORMS OF EVALUATION

I. Progressive Evaluation of Project League Independent Audit
Drs. Vaughn & Duncan, Indiana University

The independent audit is designed to provide feedback to the League facilitators responsible for planning, organizing, and implementing Individually Guided Education. Implicit in this progressive evaluation is the premise that the program is in the process of becoming. This type of feedback process serves as a guide for future actions. The team will visit all schools, collect data through records and administer questionnaires. The final report will be oral and written.

II. Principal's Peer Evaluation Process
League Principals, MEC Staff

Principals maintain a position of leadership in individual League buildings implementing IGE. They are directly involved in an ongoing staff development process of training and renewal. Significant to the success of this program is that the principals are able to "take stock" through a self-inventory and analysis of the progress of implementation of IGE in the individual buildings. Each building in turn is visited by the team of three principals who assess the strengths and weaknesses of the operations of the building staff in its various components (Instructional Improvement Committee, Learner Program, Unit Planning, etc.) and compare perceptions with the self-inventory done by the building staff itself.

III. Title III On-Site Evaluation
Title III Visitation Team

A five-member evaluation team, designated by the Title III Supervisor of the State Department of Education, visited the Merrimack Education Center's Project League on March 13 and 14. The team members will gather data through interviews with schools and MEC staff, on-site evaluation. The team members who have the opportunity to meet with local school superintendents, and community representatives as well as principals, teachers, and students.

Table 13 (Continued)

IV. Wisconsin Reading Design
University of Wisconsin

Project League schools utilizing the Wisconsin Design for Reading Skill Development are asked to fill out questionnaires regarding the first year's implementation in April. The University collates the data in the Type II Field Test Schools across the Nation. The results, as well as the questionnaires used in the sampling are available to the Merrimack Education Center for analysis.

V. I/D/E/A Monitoring Questionnaires
C. F. Kettering, I/D/E/A

Results of questionnaires administered in League Schools three times yearly are tabulated and made available to MEC for its ongoing evaluation. These questionnaires include student interview data as well as self-assessment teacher data. The IGE Monitoring Instruments, utilized on a sampling basis, are sent to all IGE schools nationwide. The Monitoring Instruments can also be used by individual schools to measure the extent of the implementation of IGE Outcomes. Subsequent administrations can then be used to determine ongoing progress.

Evaluation Progress:

Record keeping	Up-to-date file of League events and dissemination activities has been maintained.
On-site observations	All schools have been visited at least twice. Other visits have been made upon request.
On-site observations to identify new practices introduced within the school	Successful practice forms have been developed and data gathering has been started.
Needs assessment at project end to same population	Questionnaire has been administered in November and will be administered again in May. Data is stored at present in computer cards.
Independent evaluation	A contract has been given to Indiana University Center for Administrative Studies and an interim evaluation has been completed
I/D/E/A monitoring	Each of the schools has participated by completing teacher and student questionnaires. Data is available on the fall 1972 monitoring.

Presentation of Data

The data for this report were derived from interviews, questionnaires, visitations, and participant-observations. Teacher, principals, and MEC personnel were interviewed; questionnaires were completed by a sample of teachers and unit leaders; principals were interviewed formally and informally; MEC personnel were interviewed and provided certain office records; the evaluation team visited unit meetings, IIC meetings, and to interview staff; and, the evaluation team attended two Project League principals' meetings.

Each objective was subcategorized into elements that could be more easily measured than the larger objective itself. After the delineation of important elements, the evaluation assessed the most desirable way to gather information relative to each element. The selected methods included examination of Merrimack Education Center records; interview of Merrimack Education Center personnel and principals, questionnaire administration to all teachers; and, observation of a unit meeting and an Instructional Improvement Committee meeting in each school.

The date for the evaluation was gathered as follows:

Objective I. To provide Implementation Training Programs for All League Schools (staff development)

1. Examination of Merrimack Education Center records
2. Interview of Merrimack Education Center personnel
3. Interview of each principal
4. Administration of questionnaire to all teachers

Objective II. To Establish a League of Schools (build an information exchange)

1. Examination of Merrimack Education Center records
2. Interview of Merrimack Education Center personnel
3. Interview of each principal
4. Administration of questionnaire to all teachers

Objective III. To Assist Teachers in Developing Skills Related to an IGE Learning Program (assessment, goal-setting, etc.)

1. Examination of Merrimack Education Center records
2. Interview of Merrimack Education Center personnel
3. Interview of each principal
4. Administration of questionnaire to all teachers
5. Evaluation Team Observation
6. Attendance of Evaluation Team at one unit meeting in each school

Objective IV. To Monitor, Assess and Evaluate Implementation of IGE in Project League Schools

1. Examination of Merrimack Education Center records
2. Interview of Merrimack Education Center personnel
3. Interview of each principal
4. Administration of questionnaire to all teachers
5. Evaluation of Team Observation
6. Attendance of Evaluation Team at one unit meeting in each school
7. Attendance of Evaluation Team at one Instructional Improvement Committee meeting in each school

Effectiveness

Individually Guided Education, in order to be successfully implemented in schools, depends in large measure upon the willingness of school administrators to change their perceptions of their roles in the area of decision making. Conventional school administrators typically initiate decisions to which teachers or learners accommodate, and the decision is then legitimated by administrators of the school board. The IGE concept mandates that decision making at the building level be collaborative. That is, teachers and learners must learn to use a wide variety of decisions germane to school operation. Rather, principals tend to help teachers and pupils learn to make better decisions.

The data suggest that principals and other administrators have received information from MEC and the League. However, evidence that they have communicated effectively this information to classroom teachers is absent. Without information, decisions cannot be initiated. Thus, in a real sense, the IGE process is being subverted by lack of information dissemination at the building level. The alternative is perpetuation of a hierarchical building organization by virtue of the dependency created by principals in terms of information-control, motivation, and thus interaction-influence from the top to the bottom of the pyramid.

In effect, IGE demands use of the broadest range of evaluative techniques. And, they have been used, ranging from the descriptive to sophisticated, inferential techniques. Fortunately, a number of the instruments and strategies were already developed as a part of the original research and development activities conducted by the University of Wisconsin and I/D/E/A-Kettering on the IGE concept. Data are available to support progress on each of the objectives. The accumulation of diverse data which will be available at the close of Federal funding, one year from now, should provide concrete conclusions if present trends are extended. IGE, at this point in its development, is meeting the criterion of a viable alternative to the traditional.

EVALUATION FINDINGS

Individually Guided Education is an approach to elementary schooling that provides a framework or process for individualizing instruction. It is achieved through an inservice program which is designed to reorganize and redirect the time, talents, and energy of all concerned with the educational process. To this end, the Merrimack Education Center undertook the formation of a League of schools. Specific objectives included:

- attainment by all member schools of peer support
- establishment of a communication network
- provision for research assistance and service support

In addition, implementation of specific IGE Facilitator Outcomes was an overriding goal.

Summary

The assessment information indicates a need for examination by MEC facilitators of the following factors in their operation.

1. Operational problems and activities seem to be focused upon content or substantive subjects. Emphasis of IGE is based upon provision of a productive way in which units of teachers can function together to meet set objectives. Problems identified as well as discussions reported suggest that a low-level knowledge and understanding of Individually Guided Education as a process of interaction now exists after one year. Further, that impetus upon given content areas has been and is presently frustrating by virtue of the inability of teachers to employ the IGE planning system and the Unit organization in confronting and solving operational problems. In short, IGE is perceived to be a "what" rather than a "how" and until this misconception can be clarified and corrected, implementation of IGE will be effectively curtailed, teacher anxiety and hostility increased, and a generally negative attitude fostered on the part of many Project League schools.

There is a little evidence that the IGE outcomes for principals, teachers and Unit leaders and Units--stated in terms of processes to be achieved--have been used as effective tools in guiding teachers toward full implementation of the program.

2. The IGE implementation strategy appears to have been structured to coincide very closely with the hierarchical organization seen in most school systems. That is to say, the dissemination plan took into careful account school board members, superintendents, building administrators, and to some extent, Unit Leaders, in that order.

While there is no question that school boards and superintendents need to be informed, and that these persons have the responsibility of monitoring and assessing the effectiveness of IGE programs being carried on in their districts, there is some question as to their centrality in an effective implementation effort. IGE is a learner-centered process. As such, the ultimate success or failure of the program is dependent upon the attitudes, abilities and behaviors of teachers and pupils. A well-informed and positive administration, while desirable, cannot carry out the IGE program if teachers are not informed and committed.

Conclusions

On the basis of the data collected as part of this study, we have drawn the following conclusions:

1. Merrimack Education Center has based the implementation of IGE and the league strategy on diagnosed needs. Their needs assessment survey that indicated a need for individualized instruction inservice appears to have been comprehensively administered and interpreted.

2. Merrimack Education Center has informed their region that they are an intermediate agency for Individually Guided Education. This was accomplished through Clue-In Conferences, school visitations, and distribution of descriptive literature.

3. Merrimack Education Center has organized and has conducted the preliminary inservice for the thirteen schools in their newly-formed league.

4. The league has begun its initial attempts in providing support, a communication network, and a source of self-help. While only a few of the principal, unit leader, and teacher league members can actually state specifics to document this, there is still evidence to suggest the process has begun. League meetings were numerous, the topics were appropriate, and there was an opportunity for input, feedback, and interaction. However, the teachers were not sufficiently involved. It is of dubious benefit, for example, to hold a conference on the topic: "Problems, Needs, Concerns, Resources" and involve only superintendents and principals. Superintendents and principals met to share successful practices. It might be assumed, given the role of participants, that the successful practices shared related to administration.

5. In the eyes of the league members, the "intermediate agency" and the "league" are synonymous terms. Because this year was the first year of league operation, teachers have had little opportunity to visit other schools, serve as consultants, and attend inservice sessions. This has influenced their perception of the league concept.

It is reasonable that Project League had more visibility among principals, less among Unit Leaders, and dramatically less among teachers. Clearly, teachers have very little understanding of what the League is--and of what benefit it is to them.

6. Through the establishment of a representative HUB Committee, a good start has been made toward the development of a strong central committee that will match the needs and resources of the League. While the principals and Unit Leaders gave the HUB Committee a very positive appraisal, it would have been interesting to gain an accurate perception of the committee through the eyes of teachers.

7. Project League demonstrated extensive involvement of principals in League activities. Principals' meetings, agenda topics (e.g., "Role of Principal in Individualizing Instruction," "IGE Monitoring by Principal and MEC") were appropriate.

8. MEC's plan to train parents is to be applauded. The principals generally had a very positive view of the support potential of Parent Advisory Councils and MEC's efforts to strengthen parent support is commendable.

9. The data suggests that the dissemination strategy used by MEC in implementing IGE was hierarchically oriented from the top down. The Clue-In, Overview, and Principal-Unit Leader Conferences were held for persons occupying administrative positions mainly, and did not involve those persons most critical to success in the program--the teachers--until late in the sequence. This probably led to feelings expressed by some teachers that they were being asked to implement a program that was not the result of any initiative of theirs.

10. The initial inservice workshops appear to have been adequately conducted. This includes the Overview Conference, the Principal-Unit Leader (PUL) Workshop, and the Preschool Workshop. Teachers in general expressed good feeling about these activities. However, too much of a burden was put upon principals and Unit Leaders in preparing the remainder of the staff for implementation of IGE. It is unrealistic to believe that a short PUL could thoroughly acquaint a large group of principals and Unit Leaders with the concepts of IGE; it follows than that it is also unrealistic to believe that the principals and Unit Leaders could do an optimum job of preparing a full staff for IGE.

11. A general lack of understanding of the entire Individually Guided Education concept was also evidenced by some of the IGE principals' responses to the question, "Should the preservice workshops be modified?" "How?" Respondents who indicated that one day of training for the principal or no changes in the schedule would be desirable can only be persons with unusual training and knowledge--or--persons who were not acquainted with or appreciative of the depth of the changes mandated by Individually Guided Education.

12. The majority of the league schools expressed some concern about the frequency of visits from MEC personnel. They similarly expressed some concern about being able to ask for assistance and have the request answered on a fairly immediate basis. MEC has attempted to maintain a low profile implementation, that is, to de-emphasize the Intermediate Agency role.

13. "Each IGE outcome is discussed in more than one media. The IGE support materials are designed to be used over and over, in many ways and as a ready reference to achieve specific outcomes." (Implementation Guide, p. 18, R 10/71). There is a lack of congruency between the statement above and MEC schools' staff view of the value of continuing to work with the inservice media package. More than one-half of the filmstrip-cassette sets, and many of the printed publications were not even available for viewing last summer and schools that did not pursue their study of the inservice media have not viewed the total program.

14. By and large, MEC schools attempted to initiate IGE in the content areas of reading and mathematics. In many respects, such decisions are seen as unfortunate. Reading and math are perhaps of all content areas of the elementary curriculum the most standardized. Broad goals, specific objectives, learning activities and assessment techniques--to say nothing of norm-referenced tests--are all readily available in most elementary schools.

Thus, IGE units are effectively able to circumvent--actually implementing the IGE Planning System. And, unless and until Units genuinely experience goal setting, resource teacher selection and responsibility, role assignment, pre-assessment, grouping, scheduling and all of the daily operation concerned with unit instructional design, Indiviudally Guided Education will remain an idea or an acronym having little or no meaning in terms of teaching-learning.

Furthermore, the data imply that reading and math were building wide and raise the issue of what level the instructional decisions were made at and by whom. Building-wide instruction in one or two content areas is not advisable by virtue of potential competition for scarce resources and facility utilization.

15. The multiunit component appears to be the most successfully implemented aspect of the program. The teachers are organized into teams, unit leaders exist, and pupils have been assigned to the units on a multiage basis.

EXPORTABILITY

1. Describe all required equipment and materials.

a. Introduction

All basic elements and innovations of the project are considered totally adaptable and exportable. Titles are included in Table 9.

b. Materials and Equipment

The I/D/E/A-Kettering materials are available for in-service use in each of the fourteen schools. In addition, instructional programs that meet the criteria of the IGE program model are available for purchase. These include Wisconsin Reading Program, *IMS, and Continuous Progress Learning Kits. Each school has available to it the normal allocation of resources from the school district and selection are made from these resources for equipment and materials.

2. Describe any key variables without which the program should not be attempted.

a. Context of Program

Project League serves ten communities located in the Merrimack Valley in Northeastern Massachusetts. The fourteen schools involved include a variety of architectural arrangements built from 1890 to as recent as 1969. Most of the buildings include grade levels K-6 and range in size from 300 to 900 pupils. One of the schools is 1-3 only while a second serves only 4-6.

b. Special Factor for Consideration of Adoption

- Proven plan for individualization of instruction
- Curriculum programs are available commercially so that an instructional program designed to meet the needs of the individual can be implemented
- The organizational plan for the school is explicit and roles are clearly defined for the differentiated staffing pattern and the school-wide decision-making body
- The program has developed a comprehensive inservice program that includes outcomes and accompanying multi-media materials

*IMS = Instructional Math Systems

- The cost of implementation is relatively low and within the reach of most schools
- The innovation is essentially the implementation of a model that facilitates individualized instruction. Because it does not include particular instructional programs or predetermined grouping sets no decisions are made according to local needs

3. N/A

4. Describe the appropriate population for this project.

a. Population

The target area includes fourteen schools in ten communities located in Northeastern Massachusetts. Most of the area is suburban with one urban school

The student population is 97% Caucasian with 3% Black and Spanish speaking. Special education students are involved directly in the program. Children typically in grade levels K-6 are served by the project.

5. Describe the nature of the institutional variables (e.g., the school administration, teaching staff, physical facilities) which you feel would be critical to the success of the project in an adopting district.

a. Activities

The reorganization of the school into a multiunit school with differentiated staff with role description and outcome expectation

Inservice program at the "league" and local school level to provide the necessary skills to develop and manage an individualized instructional program

Development of a resource exchange and other appropriate communication channels at various levels in league schools

b. Facilities

Ten communities ranging in size from 300 to 600 students. In some of the buildings there is little remodeling, while in others, floors are carpeted and flexible spaces are available.

TABLE 14

IGE MATERIALS

I/D/E/A has produced a variety of materials that will assist school staffs with implementation of IGE. Each of the major outcomes of IGE is discussed in more than one media.

Motion Pictures

One At A Time, Together
Tuesday
Many Roads
The Unit Meeting

Filmstrips

The IGE Learning Program
Organized for Learning
IGE Learning Modes
Performance Testing and Observation
The IGE Planning System
Building the IGE Learning Program
A Reach for Tomorrow**
League Linkages**
Home-School Communications**
IGE Implementation**
Managing the IGE Learning Environment**

Print Documents

IGE Overview Brochure
IGE Unit Operations and Roles
IGE Implementation Guide
IGE Learning Program
IGE Principal's Handbook
IGE Assessment Handbook**
Color Me IGE
Multiage Grouping**
Learning Styles**
IGE League Handbook**

**New materials available in 1972-73; not all materials were available in 1971-72.

Table 14 (Continued)

Wisconsin Research and Development Center for Cognitive Learning

Total Individually Guided Motivation Package

Individually Guided Motivation: University of Wisconsin publication
Guidelines for Implementation: Guidebook for planning IGM
Three films on IGM: Illustrate how IGM is implemented in a Unit

Wisconsin Design for Reading Filmstrips

Wisconsin Design Meeting Leader's Guide: Inservice agendas
Design for Reading: Introduction to the Design
Instructional Programming Model in IGE: Delineates steps in carrying out the program of IGE and illustrates their application in Reading
Skills and Objectives: Emphasizes the nature of behavioral objectives written for every skill in Word Attack, Comprehension, and Study Skill
Assessment: Finding the Need: Shows two types of assessment (formal and informal) that are part of the Design
The Complete Picture: Appraising Individual Performance: Considers types of individual testing and observation as they are used with the Design
A Matter of Resources: Shows the purpose and organization of the Teacher's Resource File
Preparing for Instruction: Demonstrates the preparation of the pupil profile cards and illustrates the use of the cards for forming instructional groups
Design in the Developmental Reading Program: Presents the aspects of the overall developmental reading program (developmental, corrective, remedial, and accelerated)
Focusing Instruction: Stresses formation of subgroups within each skill group to accommodate individual needs
Study skills: Learning to Learn: Deals with the aspects of the study skills element that differ from Word Attack
Reading for Enrichment: Self-Directed, Interpretive, and Creative Reading Skills: Shows how they may be integrated into the reading program
Profile Cards: A New Card Game for Reading: Presents the design to students in terms of processes they will encounter; testing to find out what they already know and what they need to learn, flexible grouping to help them learn one thing at a time, post-testing for mastery, and setting goals for progress

Table 14 (Continued)

IGE/MUS-E

"IGE for all Children:" Color motion picture film

IGE Audiovisual Package: Filmstrips accompanied by audiotape cassette --
- *IGE/MUS Rules and Responsibilities
- *IGE/MUS Organizations and Operations
- *Grouping Patterns
- *Assessment in IGE
- *Instructional Programming in IGE

Transparencies: One set of ten transparencies and a guide describing the instructional programming model

IGE Print Materials Package:
- *Five IGE/MUS Guidelines for Implementation (Klausmeier, Quilling, and Sorenson)
- *One Multiunit School Directory
- *Five (three to five day) Prototypic Agendas
- *One Resource File
- *Five IGE Simulation Materials: Assessment and Grouping
- *IGE Brochure

*Available August 1, 1972

Project League is amenable to replication. The goal of providing individually guided education is a laudable one, and the Project under review provides a viable method of introducing it into systems which have such a need. Emphasis on staff development and the utilization of existing facilities and personnel add to the ease with which the major program components can be replicated. The availability of needs assessment and evaluation instruments contribute greatly to exportability as do the reasonable costs related to inservice materials. External and internal evaluation reports provide insight into the possible restraints which could be anticipated in introducing and developing a similar program.

6. Describe the nature of the institutional variables (e.g., the school administration, teaching staff, physical facilities) which you feel would be critical to the success of the project in an adopting district.

Emphasis on staff development and the utilization of existing facilities and personnel add to the ease with which the major program components can be replicated. The availability of needs assessment and evaluation instruments contribute greatly to exportability as do the reasonable costs related to inservice materials. External and internal evaluation reports provide insight into the possible restraints which could be anticipated in introducing and developing a similar program.

7. Indicate the willingness of the school district(s) to continue the project and act as a demonstration site. This is in addition to the "Certification by the School Superintendent."

The lessening involvement of Title III and the increased involvement of LEAs are indicative of the fact that the LEAs see this as an economically feasible project. Letters from all superintendents document that the LEAs intend to continue this Project into its fourth year with local funding.

The Project League Continuation Report contains the letters from all superintendents of all LEAs involved, pledging continued moral and financial support.

The following evidence can also be cited:

- In the first year, MEC (Title III funds) paid $20.00 per day for participants in preservice workshops. In the second year MEC paid $14.00 and the local districts $6.00
- When HUB members and team leaders attend meetings the districts pay for their substitutes

- First year MEC paid $3.00 per pupil for materials; in the second year MEC paid $2.00 and locals paid $1.00
- First year MEC paid 100% of aides' salaries; second year locals paid 58%

The school committee has voted 60% funding in this third upcoming year.

Yes X No

a. line item in school budget and amount
Contractual services -- $25,000 231104-2

b. direct in-kind service (please detail)
Extra pay for unit leaders
Teacher stipends for preschool workshop
Substitute pay so teachers can attend league functions
Instructional materials comparable to IGE learning cycles

BUDGET REQUIREMENTS

In completing this section please consider the following: given the fact that this project and related materials have completed the development phase, what is the lowest expenditure of money in each category listed below you estimate would be necessary for the start-up of the project at another site?

Project Budget* $103,058

For first operational year refer to Table 10

Cost Effectiveness Analysis

Development Costs

The Merrimack Education Center (MEC) provided $10,950 in planning funds for Project League. There was no planning grant from Title III. Almost half of these funds ($4,500) were used to support the professional staff during the planning period. Other funds were allocated to send the Project Director to Dayton to a Kettering Foundation Workshop and also to bring in outside consultants to work with principals and unit leaders in workshops. Materials, use of facilities, and secretarial assistance was also provided by MEC during this planning period.

*Based upon a league membership of 10 participating communities

TABLE 15

CONDITION OF ACCOUNTS
TITLE III

	1971-1972 A/C	APPRO-PRIATION	EXPENDI-TURE	CASH
Professional Salaries	103	$32,500		
Nonprofessional Salaries	104	7,000		
Materials & Supplies	106-1	2,500		
Books & Periodicals	106-2	500		
Travel	107	3,500		
Dissemination	109	1,500		
TOTAL ADMINISTRATION		$47,500		
Professional Instruction	203	9,300		
Nonprofessional Instruction	204	11,572		
Contracted Services (Consultants)	205	4,700		
Materials & Supplies (Schools)	206	18,486		
TOTAL INSTRUCTION		$44,058		
Custodial	604	900		
Telephone	609	3,000		
TOTAL OPERATION OF PLANT		$ 3,900		
Building Costs	705	6,480		
Equipment	1238	1,120		
RECAPITULATION TITLE III		$103,058		

Project Costs

1. Start-up costs (one time costs that would be required to begin this project at another school

a.	Salaries		
	Professional	$4,500	
	Nonprofessional	4,500	
b.	Contracted Services	1,000	
c.	Materials & Supplies	500	
d.	Travel (indicate purpose(s))	300	
e.	Equipment	-	
f.	Other expenses (staff development, rental, room modification, etc.)	950 1,000	
g.	Total start-up costs	12,250	
h.	Total number of learners involved		500
i.	Approximate number of hours per day		2

Initiation Costs

The first major thrust of Project League was to join ten communities together with the goal of inter-school district collaboration for the introduction and implementation of individually guided education. Much of the resources necessary to initiate the program are already allocated to the school and it was to a large degree a matter of utilizing existing staff and materials according to the IGE program.

Operation Cost After Installation

Some additional money ($23 per pupil) is needed to purchase materials that facilitate the individualization of instruction and supplement existing materials. If paraprofessional assistance is not available then money needs to be allocated. A major portion of the cost of the project is carried by the local districts.

Comments

This cost is based upon 4 schools forming a league and total costs would approximate $49,000 (12,250 x 4). It also includes no investment by the local school except for in-kind.

2. Continuation Costs (beyond first year, if different)

a.	Salaries		
	Professional	2,500	
	Nonprofessional	4,000	
b.	Contracted Services (Give general description)	500	
c.	Materials & Supplies	500	
d.	Travel (Indicate Purpose(s))	300	
e.	Equipment	-	
f.	Other expenses (staff development, rental, room modification, etc.)	1,000 1,000	
g.	Total continuation costs	9,800	
h.	Per pupil costs of your school district (9,800 ÷ 500		700
i.	Per pupil costs of this project (approx.)		20

Are there other models you might suggest of more cost effective ways of installing this project into other sites?

(increase quantity)

Comments

Above figures based upon initial four schools being expanded to include eight schools. When and if aides can be picked up by the local schools (4,000 figure) outside continuation costs can be lowered.

TABLE 16

INDIVIDUALLY GUIDED EDUCATION

Application for Continuation Grant: Project LEAGUE (Learner Guided Education). Merrimack Education Center. Project LEAGUE is an intervention strategy where change agents, i.e., the staff of the Merrimack Education Center, are attempting to bring about innovative behavior leading to individually guided education (IGE) in a set of thirteen elementary schools. 1972-73. (MEC 000 189)

Application for Initial Funding: Project LEAGUE (Learner Guided Education). Merrimack Education Center. This project will afford a solution to the problem of developing widespread educational innovation in the form of individualized instruction throughout a large geographical region. The stated regional needs include increasing pupil motivation, initiation of new instructional materials, diagnosing pupil needs, and utilization of multimedia instruction techniques. 1971-72. (MEC 000 190)

Evaluation of Merrimack Education Center's Project LEAGUE: 1972. Indiana University/Center for Administrative Studies. Evaluation of a Title III Project on Individually Guided Education in the multiunit school. (MEC 000 007)

Evaluation of Merrimack Education Center's Project LEAGUE. 1973. Indiana University/Center for Administrative Studies. (MEC 000 070)

IGE Resource People. Merrimack Education Center. A listing of Individually Guided Education resource people with specific expertise who may be available for consultation in IGE issues. (MEC 000 088)

Introduction of the IGE/MUS Model in Selected Elementary Schools and the Effects of Organizational Output. L. Bernal/Merrimack Education Center. Study measuring effects of Individually Guided Education in the Multiunit School on the results or outputs in terms of openness of the school program. (MEC 000 049)

Project LEAGUE: Learner Guided Education. Merrimack Education Center. Project League is made up of fourteen schools in ten communities in Massachusetts; project concepts, objectives, and activities are described along with evaluation procedures. (87p) (MEC 000 067)

Project LEAGUE: Learner Guided Education. Merrimack Education Center. A booklet (9p) designed to answer readers' questions about Project League. Project League is a Title III ESEA project designed to implement IGE in a network of local schools. (MEC 000 195)

Shattuck Street School: 1968-75 Achievement Test Scores. Littleton Public Schools. Test results for all children in the Shattuck Street School from 1968-75 are given. The scores demonstrate that in terms of academic achievement as measured by standardized achievement tests the IGE program is an overwhelming success. (MEC 000 133)

CERTIFICATION BY SCHOOL SUPERINTENDENT

Name of Project: _____

School District: _____

I hereby certify that the above-named project, which is under my administration, will, if validated, and if State or other funds are available, serve as a State demonstration site for a period of at least one calendar year from the date of notification and subsequent receipt of funds of such selection.

_____
Superintendent of Schools

_____
Date

A SIMULATED VALIDATION REPORT

The previous chapter gave a full rendition of a validation report. Based upon that validation report we now offer a simulated version which states four objectives, presented in Table 14 and shows how data is collected and treated to produce a set of findings and conclusions. Since success and failure in the social sciences are judgmental decisions, the scope and detail illustrated under the "validation of evidence" subsections which follow could serve as useful examples.

When validation--and evaluation--are considered from the onset of an innovative project, the expectations should be that the project will be better designed and that the level of record keeping will be improved and will serve the purposes of accountability. Each project must demonstrate success or its lack to help assure the adoption of only effective innovative programs.

MASSACHUSETTS VALIDATION TEAM REPORT

Project League: Learner Guided Education
NAME OF PROJECT

Merrimack Education Center
for: Chelmsford Public Schools
SCHOOL DISTRICT

March 6, 1973
DATE

Validation Team	Address	Telephone
1. Dr. Walter Krupa		
2. Dr. Peter Maynard		
3. Dr. Gerald Work		
4. Dr. Janet Cowsill		

A. This program is certified as being validated as an exemplary model and is recommended for state diffusion

/s/ Walter E. Krupa — March 6, 1973
Chairman, New England Regional Validation Team

B. This program is certified as being validated for informational dissemination.

/s/ Walter E. Krupa — March 6, 1973
Validation Team Chairperson

C. This program is not certified as being validated.

_____ — _____
Validation Team Chairperson

Note: If a project attains category A certification it automatically attains category B certification.

Conclusion and Recommendations

The team recommends that the Project be validated and that every effort be made at the local, state, regional, and national levels to disseminate and diffuse the elements of this Project into other schools and school districts.

TABLE 17

Major Enabling Objectives	Evaluation procedures including instrumentation	Data analysis and treatment	Findings and conclusions	Reference where evidence for column 4 may be found
1	2	3	4	5
Objective 1a: To identify & develop leadership capabilities and potential in teachers, unit leaders, and administrators	Anecdotal Records	Visual Interpretation	Successful	Interview Project Director
Objective 1b: To select and/or develop training programs for selected target populations based upon need	Interview schedules questionnaire	Frequency tabulation	Identified areas of importance	1972 Evaluation Report
Objective 2a: To increase parent participation and support for IGE objectives	Record keeping Interview schedule	Visual Interpretation	Improving	1972 Evaluation Report, Interview elementary principals
Objective 2b: To maintain and update an educational clearinghouse	Record keeping questionnaire measure	Visual Interpretation	Successful	Project League records
Objective 3a: To identify needed support systems and services in implementation of the 35 outcomes	Outcome questionnaires	Item analysis mean score	Uneven implementations indicates areas of emphasis	Project League records
Objective 3b: To establish effective linkages with external programs and resources	Observation records	Visual Interpretation	Successful	Project League records
Objective 4: To monitor, access and evaluate implementation of IGE in Project League schools	Output analysis Outcome monitoring Pupil Interview	t test f test mean scores	Successful	Project League records

Objective #1 - 4

A. Verify the completeness of the description of the activities and/or methods employed to accomplish the objective. Where appropriate, the following elements should be included: method of instruction, grade level(s), number of participants, period of operation, curricula, special materials, staffing, facilities, scheduling patterns, parental/community involvement, preservice/inservice training.

Validation of Evidence:

A review was conducted of Project League's innovative components, namely organizational development, decision-making models, staff development, and continued coordination.

Although many schools in Massachusetts may be involved in one or more of the above innovative components, none outside of Project League are involved in a total management approach through IGE. Project League effectively incorporates these components in a complete systems approach.

The total number of IGE schools in the Commonwealth of Massachusetts represents 1% of the State's elementary schools.

Evidence: National IGE Directory lists 13 Massachusetts schools, one added in September, 1972 -- Total: 14.

Massachusetts State Department of Education, Research, Planning, and Evaluation Division, lists total Massachusetts elementary schools at 1,318.

Rating of Evidence

_____ acceptable (1 point)

_____ not acceptable (0 points): Explain

Also record in appropriate box

Teachers and Unit Leaders were asked to identify the activities that took place prior to the implementation of IGE in September that were most helpful. Table 15 shows the responses to that request.

TABLE 18

ACTIVITIES IDENTIFIED BY STAFF
AS MOST HELPFUL IN PREPARING THEM FOR IGE

Activity	Frequency of Response	Percentage
1. IGE Workshops	37	34.58
2. Independent Study	19	17.76
3. College Courses	18	16.82
4. None	13	
5. IMS Workshops	8	7.48
6. Other	7	6.54
7. Previous Teaching Experience	3	
8. Student Teaching	2	1.87
TOTALS	107	

Attendance at one of the HUB meetings demonstrated the effectiveness of the staff development component of the program. The schedules and proceedings of the ongoing monthly HUB meetings, principals' meetings, and unit leaders' meetings which seek to enhance the already identified leadership potential and which offer comprehensive inservice training in staff development are well documented.

Objective #1 - 4

B. To what degree was the objective attained? What were the skills learned? To what extent did they conform to the expectations specified in the objective?

Validation of Evidence:

The Project, in its second year of operation, is collecting extensive data to support objectives. In effect, baseline data is not yet adequate to provide for definitive criteria in all of the objectives.

Evaluation procedures are extensive and intimately connected to project objectives.

Evidence: Sets of data for each of the objectives.

Many of the instruments used were taken from materials developed specifically for IGE by the University of Wisconsin Research and Development Center for Cognitive Studies and Kettering I/D/E/A - valid.

Evidence: Project League, Continuation Grant, October 1972, September 1973.

Systems approach being carried through to evaluation strategies. Since Project is in its second year, many of the strategies are in the process of being refined.

Evidence: Project League, evaluation report from the Center for Administrative Studies, and "Introduction of the IGE/MUS Model in Selected Elementary Schools."

Rating of Evidence

_____ acceptable (1 point)

_____ not acceptable (0 points): Explain

Also record in appropriate box

Objective #1 - 4

C. Review the evidence that supports the project's claim that the project activities were the cause of the attainment of the objective(s).

The evaluation supports the conclusion that the associated learner change implicit in the attainment of the objective was directly associated with project activities. Examine the conclusions drawn from the evaluation evidence for the objective for the purposes of verifying that the evidence supports the probability that learner change was associated with project activities; examine the conclusions to determine the generalizability of the findings.

Objectives failing the criterion must be eliminated from further consideration.

Validation of Evidence:

At this point in the Project data has been extensively analyzed. The most extensively used were descriptive techniques--most appropriate at this point in the development of the Project. In those cases where inferential techniques were used, the strategy was appropriate.

Evidence: Examination of data connected with each of the objectives.

No glaring errors noted. Data analyzed by computer assumed to be error-free.

Evidence: Examination of data connected with each of the objectives.

At this point in the Project, conclusion must be considered tentative. Data available to support tentative conclusions advanced.

Evidence: Project League, evaluation report from the Center for Administrative Studies, "Introduction of the IGE/MUS Model in Selected Elementary Schools."

Rating of Evidence

_____ acceptable (1 point)

_____ not acceptable (0 points): Explain

Also record in appropriate box

TABLE 19

LEARNING PROGRAM DIFFERENCES IN 1971-72 COMPARED TO 1970-71 AS PERCEIVED BY BUILDING PRINCIPALS

SCHOOL	DIFFERENCES
A	We started the year with walls closed. Now a few are opening. We moved from departmentalization to semi-departmentalization
B	We're using Unit Leaders. We're attempting multiage grouping.
C	Very different. We're teaming, multiaging, and children are moving at their own pace.
D	We're teaming more effectively. We're using the math program.
E	More small groups; more multiage instructional groups; more aware of assessment needs.
F	Math is different.
G	More individualization than last year.
H	None. . ..We were already doing it.
I	We're still graded now (next year we'll ungrade) but our teams are working.
J	We're doing a better job of planning.
K	We have multiaging and Unit Leaders; Teachers are more involved in the total school program; Our group sizes vary and we're using one to one instructional situations; Older children are working with younger ones; Children are working at success levels; Children are being assessed by more than one teacher.
L	We've just formalized last year's program.
M	Our reading program is different.

The data from the chart above are limited in quantity, but perhaps very significant. With the exception of one school, all principals felt that a definite change had taken place, although the change might have been very slight. More importantly, the data showed that IGE has progressed on a broken front and that future efforts at improvement should consider the different levels of growth of each school.

Objective #1 - 4

D. Review the evaluation procedures for each objective. The description of the procedures should include who did what to whom, how, when, and under what conditions to collect evaluative data.

Validation of Evidence:

Longitudinal data not yet available. Recommendations from Wisconsin and Kettering I/D/E/A indicate a three to five year period to implement a total IGE program. Data available at this point indicate progress is as anticipated.

Evidence: All data available for each objective

Collection of baseline data considered to be strong

Evidence: All data evaluated in conjunction with each of the objectives.

Monitored by external consultants as well as Project personnel.

Evidence: Project League, evaluation report from the Center for Administrative Studies, self-evaluation report.

Rating of Evidence

_____ acceptable (1 point)

_____ not acceptable (0 points): Explain

Also record in appropriate box

Objective #1 - 4

E. To what extent are the procedures, activities, or methods described presently in operation? The evidence for the validation of this section will be in the form of written information provided by the project director. This will be verified by on-site observation and interviews with persons associated with the project.

To be completed during the on-site visit.

Validation of Evidence:

Adjustment to differences in ability, learning rates, learning styles can profitably be adopted and/or improved in all school districts. Parental involvement has provided an important dimension to the Project.

Evidence: MEC records indicate volunteer services from community; parents have provided a series of pamphlets related to IGE; agendas of advisory committee meetings are available at MEC; Newsletter.

The emphasis in the program has been on staff development for leadership in individualizing instruction; student population cut across the entire range of learner characteristics of the schools voluntarily participating. These populations are described in the MEC records; i.e., Project League.

Documented evidence available at MEC: Units of teachers described, materials cataloged, inservice programs described, feedback from principals' meetings and HUB committee sessions available, clear organizational charts are available. In addition, considerable information about IGE is generally available.

Much of the data processed by computer. Credentials of staff meet or exceed competencies needed.

Evidence: Examination of data, both descriptive and inferential for all objectives.

Rating of Evidence

_____ acceptable (1 point)

_____ not acceptable (0 points): Explain

Also record in appropriate box

TABLE 20

EVALUATION SUMMARY RECORD
EVIDENCE OF EFFECTIVENESS

ITEM	OBJECTIVES				
	1	2	3	4	5
a. Activities					
*b. Attainment					
*c. Cause of Attainment					
*d. Evaluation					
*e. Continued Operation					
TOTAL					

*Items b, c, d, and e must score 1 point. If any of these items do not receive a rating of 1 point, reject the objective for further validation.

Each objective must score a total of 4 points for validation. If so, record 4 in the appropriate box at the bottom of this page.

If the objective receives a score of less than 4 record a "0" in the appropriate box at the bottom of this page.

The team member is to average the scores they have given all of the objectives and record it in the box labeled "average."

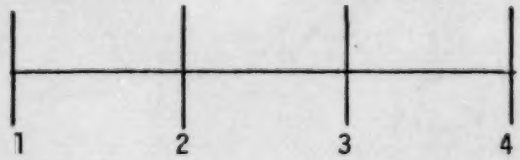
OBJECTIVES

1	2	3	4	5	Average

Exportability

To what extent are the procedures, activities, or methods described presently in operation: The evidence for the validation of this section will be in the form of written information provided by the project director. This will be verified by on-site observation and interviews with persons associated with the project.

- Examine and verify the evidence provided for each item reported in the application for validation, exportability.
- Assign on the scale below a point value of "1" if you feel the program should not be validated. Include recommendations.
- Assign a point value of "2" on the scale below if you feel the program should be verified for state informational dissemination. Include recommendations.
- Assign a point value of "3" on the scale below if you feel you cannot certify it for state diffusion but with the adoption of some recommendations validated for such certification may result. Include recommendations.
- Assign a point value of "4" on the scale below if you feel the project is worthy of state diffusion.



Record the score above.

Recommendations

Given the condition of similar interest and leadership, the Project provides material for replication. Available at MEC are: needs assessment instrument, inservice materials, organizational descriptions, brochures, and booklets on such topics as learning styles and skills checklists, newsletter.

The narrative together with evidence of the ongoing process intrinsic to the Project is available and valuable for the replication of the Project. Interim evaluations, peer process records, minutes of principals' and HUB meetings provide data relative to process.

Since the actual training of personnel is basic to the entire Project, it is particularly unrestrained by any need for numbers of highly trained specialists. Staff development is provided as an essential focus of the program.

Methods of reproduction of materials are essentially those available in the majority of school districts.

Since most instructional programs utilize commercially prepared materials in addition to locally produced materials, cost cannot be construed as detracting from potential for adoption.

About three dollars per pupil were added to routine costs of instructional materials.

A district seriously interested in making the changes described by the Project narrative would probably not be deterred by the cost of the equipment.

Since emphasis in the Project is on staff development and growth in expertise in individualizing, facilities of varying types have been successfully used.

Slides available at MEC.

Internal and external evaluation reports provide evidence of constraints encountered and subsequent direction.

Evidence: Self-improvement facilitated through peer evaluation reports questionnaire used for planning workshop at end of year, agendas of principals' and HUB meetings indicate areas of concern; awareness of areas of weaknesses and recommendations for change in pre-evaluation report of February 1973.

Economic Efficiency

Basic upon the budget information provided and the population served, is this program economically efficient?

____ Yes (1 point) ____ No (0 points)

Record the score on the appropriate page.

In comparison with other programs which emphasize staff development, the cost is moderate, since the cost of inservice is shared among several systems participating in the League. Initial start-up costs for staff development will in part reflect proximity to existing League or Leagues.

VALIDATION SUMMARY

Part I.	Evidence of Effectiveness	Average Score_____
Part II.	Exportability	Average Score_____
Part III.	Economic Efficiency	Average Score_____
		TOTAL _____

A validation team average total in excess of 8 certifies the project as validated for Category A.

A validation team average total in excess of 6 but less than 8 certifies the project as validated for Category B.

A score of less than 6 certifies the project as not validated, Category C.

RECOMMENDATIONS

APPENDIX A

TITLE IV-C ESEA EVALUATION
INTERVIEW QUESTIONNAIRE
1976-1977

The purpose of this interview is to get your (Project Director) views on how the project is going up to now and perhaps to explore aspects of project management which you feel might be improved in the time remaining between now and June.

There are three objectives to these field visits we are making now. The first, and perhaps most important, is to determine ways in which we might help out with various phases of the project, especially with issues of long-term maintenance and dissemination. Secondly, we want to get some information from each of the projects which we can use later in the workshop sessions we have remaining. The third is to collect information for the State on the problems and progress of this first year of Title IV-C which will help the State staff do a better job next year.

Do you have any questions at this point before we begin?

1. Would you describe your project to me?

2. How is your project going at this point? (Interviewer will need to ask leading questions to move response from yes/no.)

3a. Who are the people that your project services directly?

3b. Is there a specific subgroup you will be working with you could call your primary target group? If yes, how many people are in this group? What should be the primary consequences and benefits for this group?

3c. Are there others who also receive benefits? Who are they and what benefits do they receive?

3d. How will they receive these benefits? (i.e., through what process or mediation?)

4. Given the following choices, how would you describe your project?

(a)_____It is a very new and unique concept as far as you know

(b)_____It is new at least for Massachusetts

(c)_____It is new at least for this school district

(d)_____It is new at least for the particular client group you are working with

(e)_____This project is not really an innovation in the usual sense although there are innovative aspects

(f)_____This project is not intended to be an innovation in any real sense

5. If you consider your project innovative, will you explain what you view as the most innovative aspects? For example, is it innovative in any of the ways listed here?

(a) Audience:

(b) People Involved:

(c) Need Addressed:

(d) Resource or Materials Used:

(e) Content Provided:

(f) Educational Process:

(g) Other:

6. How would you characterize or describe the strategy or the model of change which is exemplified by your project?

7a. How would you define your role in the project?

7b. What percentage of your total time is spent on project duties?

7c. What sort of work do you perform in addition to this project?

7d. What single personal attribute of skill have you found to be of greatest value in performing your task?

8. Your various roles as project director involve the following percentage of time:

	Now	Later in Project	Do you feel you had any kind of help or guidance in any of these areas?
(a) Manager (including planning budgets, administration, staff recruitment, supervision, making key decisions)			
(b) Facilitator (including coordinating, scheduling, consultant to project staff, problem-solving, team-building, linking to resources)			
(c) Communicator (including dissemination, public relations, liaison, relating to press media, speaking to outsiders about the project)			
(d) Guiding Light (including writing, providing ideas, content and procedures, instigators, trainer, inventing, innovating, designing, creating)			
(e) Other type of role:			
	100%	100%	

9. Have you been able to build relationships with people in key positions? (Those who authorize, unlock doors to funds, clients, etc.?)

(a) Who are they?

(b) What kind of effort was needed to acquire these relationships?

(c) How do you maintain these relationships?

(d) What way were they involved in the writing of the proposal?

(e) What percentage of time actual writing is yours?

(f) What is your relationship to others who were involved at the proposal stage?

(g) Are there any current problems in areas where the relationships could be improved? (If yes, then probe for interview)

10. How well have you continued to assess and diagnose needs and problems? Can you explain your answer further?

11. How much effort has gone into assessment and diagnosis?

_____None

_____Minimal

_____Reasonable amount

_____Large amount

_____Extremely large amount

13. To what extent are you satisfied with the financial support the project has received thus far?

_____Money left over (how much?)

_____Adequate funds

_____Not enough (how much more would you need to adequately complete your objective?)

14. Do you anticipate acquiring adequate financial resources to continue the project? What kinds of activities did you employ (or contemplate) to meet the need of adequate funding?

15a. What is the amount of effort and degree of success so far in searching for and acquiring information, products, and materials for the project?

15b. Can you explain including types of activities, problems and difficulties encountered?

16a. Have you considered or developed alternative solutions for project objectives different from those expressed at the start of the project?

16b. If so, how did the alternatives emerge?

16c. Have any new alternatives emerged since the project was funded?

16d. What process was used (if any) to adapt or test the solution chosen before implementation?

17a. Do you have plans for diffusion of this project or its findings?

17b. What activities are contemplated?

17c. How will they be supported?

18a. Have specific steps been taken to insure the continuance of the project after the funding period is over?

18b. Have steps been taken to insure the durability of the accomplishments of the project? What are they?

19. How are you evaluating the benefits (outcomes) of the projects? (What criteria? Qualitative or quantitative means? Can you provide this to us?)

(a) Assume for the moment the role of an outside critic of the project. What one or two major criticisms of the project would you offer?

20. In both this year's and last year's workshops for directors, we have focused on a problem-solving model of change with the idea that the one thing all projects had in common was the process.

(a) How do you feel about this approach?

(b) Do you think the Havelock model described your process? How would you describe it differently?

(c) Have you read the report on last year's projects? Do you feel that this is a basis for:

(1) Helping project directors

(2) Evaluating Title IV-C

(3) What alternatives

21a. How do you feel about the seminar sessions we have had so far?

21b. Are there some special areas on which the coming seminars should focus?

22. Are there other areas that you would like to discuss?

APPENDIX B

EVALUATION OF TITLE IV-C PROJECTS
PROJECT DIRECTOR QUESTIONNAIRE

Background

1. Your Name_____

2. Name of Project_____

3. For how many years has project been in operation?

_____Year(s)

4. For how long have you been its project director?

_____Year(s)

5. At what stage of the project did you become involved with the project?

_____First suggested idea of project

_____Helped make pre-proposal arrangements

_____Formulated objectives

_____Wrote proposal

_____Became involved with project after funding

_____Other, please specify_____

_____

Communications

6. For each of the people or groups of people listed below indicate (a) how frequently you have personally talked with each and (b) whether you are satisfied with the amount of personal contact you presently have with each.

	Frequency of Contact				Satisfaction With Contact	
	daily	weekly	monthly	less frequent	Satis-fied	want more contact
Superintendent	___	___	___	___	___	___
Other central office administrators	___	___	___	___	___	___
School board members	___	___	___	___	___	___
School principals	___	___	___	___	___	___
School specialists	___	___	___	___	___	___
Non-project teachers	___	___	___	___	___	___
Project teachers	___	___	___	___	___	___
Participating students	___	___	___	___	___	___
Parents of participating students	___	___	___	___	___	___
Other parents	___	___	___	___	___	___
Town officials	___	___	___	___	___	___
Public media people	___	___	___	___	___	___
Other (specify) _____	___	___	___	___	___	___
_____	___	___	___	___	___	___

If you wish more contact with any of the above, what prevents you from establishing more?

7. Do you use means other than personal contact for informing others of the project?

_____Yes _____No

If yes, what means? (Please enclose samples if feasible)

If yes, how would you characterize the effectiveness of this (these) means?

Project Objectives

8. Have your project objectives been modified since this past summer?

_____Yes _____No

If yes, how and why?

If yes, by whom?

9. How relevant would you rate your present project objectives?

_____Very relevant

_____Relevant

_____Somewhat Relevant

_____Very Irrelevant

If you rated objectives as somewhat or very irrelevant please explain why.

If you rated objectives as somewhat or very irrelevant are there plans to change them, and if not what prevents you from changing them?

10. Are there any groups with whom you deal who you think do not fully understand the objectives of your project?

_____Yes _____No

If yes, who are they and what difficulties do they have in understanding?

11. Of your project objectives, which ones are you having the most difficulty achieving at this stage? Why?

12. Of your project objectives which ones do you anticipate having difficulty achieving in later stages of the project? Why?

Project Operation

13. On the five point scale, how would you rate your ease in dealing with each of the following areas?

	No Difficulty in Handling				Very Great Difficulty in Handling	Not Relevant
obtaining initial funding	1	2	3	4	5	_____
obtaining project approval	1	2	3	4	5	_____
recruiting appropriate staff	1	2	3	4	5	_____
scheduling project staff	1	2	3	4	5	_____
scheduling students	1	2	3	4	5	_____
recruiting participants	1	2	3	4	5	_____
retaining participants	1	2	3	4	5	_____
obtaining appropriate facilities	1	2	3	4	5	_____
obtaining relevant materials	1	2	3	4	5	_____
scheduling training workshops	1	2	3	4	5	_____
scheduling parent meetings	1	2	3	4	5	_____
obtaining continuance funding	1	2	3	4	5	_____
obtaining organizational support	1	2	3	4	5	_____
obtaining community support	1	2	3	4	5	_____

For any areas which you have ranked 3, 4, or 5, please explain problems you have had/are having.

14. What strengths do you see in the management and/or operation of your project? How did it/they come to be strengths; that is, what was done by you or others to make it/them strong aspects?

Evaluation

15. Are you conducting/planning to conduct any internal evaluation of your project or aspects of it?

_____Yes _____No

If yes, what are/will you be evaluating?

If yes, how are you/will you be conducting the evaluation?

16a. From the perspective of your own project, how would you define success in your project?

16b. How successful, success being on your own terms as just defined, do you anticipate your project to be by the end of the year?

_____Will be very successful

_____Will be somewhat successful

_____Will be somewhat unsuccessul

_____Will be very unsuccessful

Why?

17. Have you completed any internal evaluation of your project or aspects of it?

_____Yes _____No

If yes, how was the evaluation conducted?

If yes, what were the evaluation findings?

Training

18. What types of preparation do you think you need in order to cope with present or potential problems related to your project?

APPENDIX C

AGENDA FOR JANUARY 20th TRAINING SESSION

Afternoon Session: Evaluation - Merrimack Education Center

1:00 - 2:00 General Session

Lenny Glick

1. Objective: To learn the basics of developing an evaluation design
   - (a) The difference between formative and summative evaluation
   - (b) Setting up an evaluation design (to include the relationship of the evaluation design to the validation process)
   - (c) Developing an instrument matrix to determine best sources of information
   - (d) A bibliography will be available on evaluation
2. Objective: To learn how to develop and interview instruments
   - (a) Questionnaires vs. interviews
   - (b) Item writing
   - (c) Interviewing techniques

2:00 - 3:00 Interest Session -- Where participants will have an opportunity to get information specific to their project. (Each session will last one hour. Select one.)

Beth Hoppes

1. Objective: To learn to write items for questionnaire and interview instruments
   - (a) Review of sample interview schedules and questionnaires for various audiences
   - (b) Assistance in developing interviewing schedules and questionnaires

Lenny Glick

2. Objective: To learn how to use evaluation results
   - (a) Analysis of information (including pre and post testing, "hard" vs. "soft" data, and comparing data from different audiences
   - (b) Interpretation of data (response rate, target population)
   - (c) Reporting results

Pam Woodroffe 3. Objective: To learn about interviewing techniques through practice

(a) Do's and Don'ts of interviewing

(b) Simulating and critiquing sample interviews

3:00 - 3:30 Wrap Up Session

Glock
Hoppes
Woodroffe

(a) Respond to remaining questions

(b) Plan for next training step

(c) Objective: To demonstrate an understanding of the evaluation techniques presented throughout the afternoon session

Complete an evaluation form for the session and evaluate the form itself for evaluative uses in other settings

APPENDIX D

EVALUATION RESULTS OF DISSEMINATION AND EVALUATION TRAINING FOR TITLE IV AND CHAPTER 622 PROJECT DIRECTORS ON JANUARY 20, 1977

MORNING SESSION

Videotaped Interview session

The presentation...

	* 1	2	3	4	5	No Response
was well organized/conducted	4	1	1			10
presented useful information	6	1				9
allowed me to practice skills I will need	5	1	1			9
provided answers to questions I had	4	3	1			8
was interesting	7	1				8

Comments:

- Ran out of time for everyone to try
- Did not attend--insufficient time allowed
- Sara Ann Shaw was very good and helpful--and asked me to call her to get TV coverage of my project--a definite plus!
- Dynamic, interesting, worthwhile experience for participants and observers. More energy than any other activity/workshop I have attended during 2 years of Title III/IV conferences.

* 1 = Strongly Agree
  5 = Strongly Disagree

Brochures and Newsletters session

The presentation...

	1	2	3	4	5	No Response
was well organized/conducted	4	2	2			9
presented useful information	6	1		1		9
identified different uses of brochures and newsletters for me	4	2	2			9
taught me how to use these methods effectively	2	2	2	2		9
provided answers to questions I had	4	3		1		9
was interesting	4	2	2			9

Comments:

- Wanted to attend--no time
- Room?
- Pointed out principle concerning use--material fitting the purpose and the audience.
- This would be a good session to do early and longer. Good to see examples.

Using the Media session

	1	2	3	4	5	No Response
was well organized/conducted	4	1				12
presented useful information	4	1				12
identified aspects of my project that could be disseminated	1	1	1		2	12
helped me learn of ways to present my project	2		3			12
provided answers to questions I had	2	1	1			13
was interesting	3	1	1			12

Comments:

- excellent

Setting Up a Workshop session

	1	2	3	4	4	No Response
was well organized/conducted	4	1				13
presented useful information	5					13
showed me how to run a workshop	3	2				13
showed me how to write objectives for my workshop	2	2	1			13
provided answers to questions I had	4		1			13
was interesting	3	2				13

Comments:

- helpful
- did not attend--too many choices; all looked good

Slide-Tape Production session

	1	2	3	4	5	No Response
was well organized/conducted	4	2				10
presented useful information	4	1	1			10
showed me how to prepare a slide tape presentation	1	4	1			10
provided answers to questions I had	3	1	1		1	10
was interesting	5	1				10

Comments:

- Made me wish I had the money to buy necessary equipment.
- Again, this is a technical topic which could benefit by having more time.
- Very interesting slides but I could not use the information since I'm too uninitiated in this stuff.

Funding Information session

	1	2	3	4	5	No Response
was well organized/conducted	6	1				10
presented useful information	5	2				10
familiarized me with sources of funding	6	1				10
provided answers to questions I had	5	1	1			10
was interesting	4	3				10

Comments:

- helpful, group input helpful

For All Participants to Answer

Looking back, are there any changes in the dissemination training that you would have made?

7 *Yes* 7 *No* 3 *No Response*

If yes, please specify these changes.

- Conflicted--would have liked more intensive exposure for it to be useful, but also liked "sampling".
- Do whole thing again next time so I can attend other sessions (or I could have brought 1 or 2 staff members so we could have covered it all).
- More specific possible all day session.
- Another setting--less crowded room.
- More literature from other programs. Perhaps out of state.
- It is difficult to absorb all the data--the handouts with some sessions are very helpful--perhaps a handout for all sessions would help more.
- Allow more time to attend sessions.
- More intensive, longer for each topic.
- Only geographic (room change).
- Not at this time, maybe upon reflection.

Would you like additional training in dissemination?

5 *Yes* 8 *No* 3 *No Response*

If yes, what topics do you think should be discussed? speakers invited?

- I would have liked to attend more sessions, but no time. The TV was beneficial or just interviewing on the spot techniques. Due to time we didn't all get a chance. It would be good to all to expereince this. This whole day could be done again to devote more time to these topics.
- How about an exchange system to find out what other school systems would like to know about current projects--sharing of existing resources, finding out from program officers where material might be passed along, etc.
- Broader regional distribution tactics.
- Creative approaches, knowing your audience, return upon investment.
- Setting up community links and non-public school links using political base.

AFTERNOON SESSION

(ratings for "good? items only)

General session

In what ways were the objectives of learning to develop an evaluation design, questionnaires, and interview schedules relevant to your project activities?

- Indirectly--I'm a "consumer" of evaluation since I have an evaluation consultant.
- Helped me determine when and what I should do with questionnaire.
- Handouts were helpful. I could use more information about writing styles for various instruments and p.r.
- Not directly, but provided good reference material.
- Direct and immediate.
- Thought-provoking.
- For refunding I'll have to do some of this.
- Helped me to organize my thoughts better.
- Very relevant. I am in process now of preparing and using data gathered from instruments.
- 1. helped focus my ideas
  2. good examples given of pitfalls, etc.

In what ways were the objectives not relevant to your project activities?

- None
- My project is primarily affective and there seems to be a gap in designing effective, valuation techniques in this domain.

Please rate the presentation. It...

	1	*2*	*3*	*4*	*5*	*No Response*	
presented new information	2	1	2	1	2		*presented information I already knew*
presented useful information	4	3				1	*presented information of little use to me*
was well organized/ conducted	4		3			1	*was poorly organized/ conducted*

Interest session

	1	2	3	4	5	No Response
was well organized/conducted	8	5	1	1		3
presented useful information	9	3	1	1		4
met its objective	6	4	2	1		5
provided answers to questions I had	6	6		2		4
was interesting	7	4	2	1		4
was worthwhile	7	4	1	2		4

Comments:

- too short
- time too limited for intensive discussion--issues very complex
- we didn't do any writing of items, but excellent guidelines were discussed
- reading to audience at times

WRAP-UP

How useful do you think the handouts will be to you?

5 *very useful*

4 *somewhat useful*

1 *not very useful*

If you rated the materials SOMEWHAT or NOT VERY USEFUL, please explain.

- could have been in October--would have been more useful
- I'll see!
- General information not directly applicable but might come in handy as ideas.
- A lot of the materials are redundant and contain information that I already possess. I would have liked more materials from projects in other parts of the country.
- Not all of these have been used by me or will be used by me because they do not apply to my program.
- I am not responsible directly for evaluation. They will be shared with our evaluators and I may eventually use them in some of our educational activities with school personnel.

If you were to coordinate or help to coordinate a seminar on evaluation techniques, practices, and procedures for a group such as Title IV project directors, would you use the type of format covering the types of topics discussed today or would you have made some changes in format or in topics presented?

or

Looking back, are there any changes in the evaluation training that you would have made?

4 *Yes* 2 *No* 2 *No Response*

If yes, please specify these changes.

- Would have been good to base it on materials/problems on evaluation submitted in advance.
- I think I would have offered only the morning or afternoon programs. This program was too congested for one day. I think that a follow-up asking questions should be held next session with good and bad questions presented.

- More experiential, for instance: small groups with the task of evaluating a hypothetical project, or designing evaluation component for a new project. I would be more clear and direct about my evaluation questionnaire and getting input from participants.
- Not enough time to attend <u>all</u> of the seminars I was interested in.
- O.K.
- Yes, I thought it was good.
- Not sure
- Good format, but needed more time. I would have liked to attend all <u>three</u> sessions. Very interesting presentation. Workshop leaders seemed under time pressure to get finished.
- Critique individual project evaluation plans.
- More depth, less choice on "exposure".
- Because we operated on such a tight time frame.
- More time.

Future Training

Do you have any suggestions for future training? Please specify (topics, speakers, demonstrations).

<u>or</u>

Do you think there should be future training sessions?

2 *Yes* 2 *No* 2 *No Opinion/Not Sure* 1 *No Response*

Comments:

- I feel that I could not work on skills in a practice session which would have been helpful.
- Specific skills. Take time to design your own questionnaire. Then get reactions and rebuild.
- Not at this time.
- 1. More on funding options
  2. Working with School Committees
- The Educational Research Corporation program is good, no excellent. I would endorse and encourage it.
- Continue present approach.
- Grouping of participants who are in "attitudinal change" evaluation for techniques and strategies.
- Hold some in Western Mass.!

- More experiential workshops--audio/visual role plays, team building. Topics: Perhaps discussing politics with local politicians, relevant to school systems. Exploring new ways of using State Department of Education as a resource. Looking at similarities between projects and how we can use each other as resources over and above sharing information at these conferences.

APPENDIX E

USING STANDARDIZED TESTS

You may want to use one of the several standardized tests to pretest and post-test learners and comparison groups if your program is attempting to improve achievement. Frequently such tests are a part of the regular school testing program anyway so your use of these tests in your Title IV innovative program would be convenient. You are probably familiar with the standardized testing process, but since the tests are so commonly misused it may be worthwhile for you to review briefly some of these common misuses.

For complete explanations of why these practices create difficulty, please refer to: Practical Guide to Measuring Project Impact on Student Achievement by Horst, Tallmadge, and Wood. The authors provide detailed discussions about the effects that each of the following points have in creating valid evaluations.

1. Do not use grade-equivalent scores for computation or reporting since grade-equivalent scores are projected figures in many cases and are, therefore, misleading. Convert raw scores to standard scores for computation. Means can then be converted to percentile equivalents for reporting.

2. Never use gain scores to try to adjust for differences in scores among treatment and comparison groups because use of gain scores cannot adequately do this.

3. Always test students within a few weeks of the dates on which the normed groups were tested. Regardless of what test publishers might claim, normative data are only really applicable when students and the normed population are tested at exactly the same time of the year.

4. Choose the appropriate level of test. Students should score in the mid range of possible raw scores, slightly below the mid range on the pretest slightly above on the post-test. Always use the same level of test for pre and post-tests.

5. Do your utmost to get pretests and post-tests for all participants but make pretest/post-test comparisons only for those students with both sets of scores.

6. Administer and score tests carefully. Use orderly test procedures and follow publishers directions accurately. Test all students under exactly the same conditions for both pretesting and post-testing, this includes same time of day and same place for testing. Use nonprogram people for testing if possible.

7. If achievement gains appear do not assume they resulted from your project. Examine all possible alternative explanations. This may require applying different types of control procedures in succeeding years before all alternative explanations of gains can be eliminated.

8. If project participants are selected because they scored at the high end of low end on a standardized test, you will have to use special regression models for analyzing your test data.

There are numerous standardized achievement tests in use today but below is a list of the more commonly used test batteries, the general subject areas tested, and the grade levels covered in the tests.

General Achievement Batteries	Subject Areas Tested	Grade Levels
Comprehensive Test of Basic Skills (CTBS)	Reading, Language Arts Math, Study Skills	2.5-12.9
Revision of the California Achievement Test (CAT)	Reading, Language Arts, Math, Study Skills	2.5-8.9
Iowa Test of Basic Skills (ITBS)	Reading, Language Arts Math, Work Study	3 - 9
Iowa Test of Educational Development (ITED)	Social Concepts, Natural Sciences, Interpretation, Social Studies, Literary Materials, Vocabulary, Use of Materials	9 -12
Metropolitan Achievement Test (MAT)	Reading, Language Arts, Math	1.5- 8
	The above plus Social Studies, Science, Study Skills	5 - 8
	The above plus Math Analysis and Problem Solving, Scientific Concepts and Understanding.	9 - 13
Sequential Tests of Educational Progress (STEP)	Reading, Writing, Math, Science, Social Studies, Listening	4 -12

General Achievement Batteries	Subject Areas Tested	Grade Levels
SRA Achievement Series	Reading, Language Arts, Math, Social Studies, Science	1 - 9
Standard Achievement Tests (SAT)	Reading, Spelling, Math	1.5 - 9.9
	Social Studies, Science	Upper Grades
Stanford Achievement Test	English, Math Reading, Science, Social Studies	9 -12
Test of Academic Progress (TAP)	Social Studies, Composition, Science, Reading, Math, Literature	9 -12

APPENDIX F

Date	Topics	Resource
September 22 Wednesday	Project Director's Orientation Meeting	MDE; Title IV-C staff
October 5 Tuesday	Role of Project Director - Problems/Issues - Case Studies - Problem Diagnosis/Needs Assessment - Skills needed for effective local leadership	MEC Ron Havelock
October 28 Thursday	Simulation Game Dissemination	MEC & Havelock MDE
November 17 Wednesday	Leadership/Management Appraisal - In-basket action exercise - Simulation	MEC & Allan Ellis of Educational Research Corp.
January 20 Thursday	Managing Change - Models - Utilizing Resources - Coping Strategies	MDE MEC & Havelock
February 15 Tuesday	Analyzing and Improving Program Implementation	MEC & Glen Heathers of Research for Better Schools
March 14 Monday	Implementation Strategies - Consumer-centered - Product-centered change strategies	MDE MEC & Heathers
April 13 Wednesday	To be announced	MDE
May 9 Monday	Informal Communication - Political Behavior - Political Implications	MEC & Ellis
May 26 Thursday	Networking - Dissemination Process - Communication (briefing & reports)	MEC & Havelock

SELECTED READINGS

Further Readings in Evaluation

Anderson, Scarvia B., Samuel Ball, Richart T. Murphy and Associates. Encyclopedia of Educational Evaluation. San Francisco, CA Jossey-Bass Publishers, 1975.

Buros, Oscar Krisen. Mental Measurements Yearbook. New Jersey: The Gryphon Press.
Use the most recent edition available for a complete listing and review of achievement, aptitude, and attitude tests in current use.

Phi Delta Kappa National Study Committee on Evaluation. Educational Evaluation and Decision Making. Itasca, IL: F.E. Peacock Publishers, Inc., 1971.

Popham, W. J. (Ed.) Evaluation in Education. Berkeley McCutchan Publishing Corp., 1974.

TenBrink, T.D. Evaluation: A Practical Guide for Teachers. New York: McGraw-Hill, 1974.

Further Readings in Writing Objectives

Bloom, B.S., J. Thomas Hastings, and George F. Madaus. Handbook on Formative and Summative Evaluation of Student Learning. New York: McGraw-Hill, 1971.

Bloom, B.S. (Ed.) Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook 1. Cognitive Domain. New York: McKay, 1956.

Krathwohl, D.R., B.S. Bloom, and B.B. Masia. Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook 2. Affective Domain. New York: McKay, 1964.

Mager, Robert F. Preparing Instructional Objectives. Palo Alto, CA: Fearon Publishers, 1962.